REPORT RESUMES

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SCHOLASTIC APTITUDE TESTS FOR GRADES VIII AND XI.
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DESCRIPTORS- *RESEARCH PROJECTS, TEST CONSTRUCTION, TEST SELECTION, *TESTING, *APTITUDE TESTS, *STANDARDIZED TESTS, GRADE 11, GRADE 8,

THE PURPOSE OF THE PROJECT REPORT IS FOURFOLD--(1) TO PROVE THE NEED FOR SCHOLASTIC APTITUDE TESTS, (2) TO SHOW THE NEED FOR A COMMON TEST FOR A LARGE GEOGRAPHICAL AREA, (3) TO SHOW THAT SCHOLASTIC APTITUDE TESTS ARE PREFERABLE TO TESTS OF INTELLIGENCE, AND (4) TO DISCUSS THE EXPECTED OUTCOMES WITH THE ADMINISTRATION OF SUCH TESTS. THE REPORT IS PRESENTED IN FOUR MAJOR SECTIONS--(1) A STUDY OF THE CRITERIA, DEVELOPMENT, AND SELECTION OF TEST ITEM-TYPES, (2) AN ANALYSIS OF ITEMS AND PREPARATION OF FINAL FORMS, (3) A STUDY OF THE ADMINISTRATION OF FINAL FORMS (WITH DATA ON NORMS AND RELIABILITY), AND (4) THREE EXTENSIVE APPENDICES OF RELEVANT TABLES, GRAPHS, AND CHARTS. (RD)

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NIE-HEW PROJECT NO. 003

SCHOLASTIC APTITUDE TESTS
for
GRADES VIII AND XI

(PROJECT REPORT)

SCHOLASTIC APTITUDE TESTS
for
GRADES VIII AND XI

(PROJECT REPORT)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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DEPARTMENT OF PSYCHOLOGICAL FOUNDATIONS
(National Council of Educational Research & Training)
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SCHOLASTIC APTITUDE TESTS

Chapter I

Introduction

Need for Scholastic Aptitude Tests

There is concern all over the country over the large percentage of failures both in school as well as public examinations. At high school stage, in eighty percent of cases the pass percentages in different boards administering the examinations are less than 70%.[1] The problem of wastage needs urgent attention in our country and from various angles too. The nation cannot afford to waste such large amount of financial and human resources; checks are needed very urgently to stop this wastage. While insufficient and poor instruction may be one of the reasons, indiscriminate admissions and wrong placements of pupils in different courses can be another. It should be possible to reduce the number of failures by improving admissions through the use of tools which have known and acceptable predictive effeciency.

There are two points at which schools and parents have to take decisions about the future course of education of their wards, namely, (a) the end of the middle school (b) the end of the high school. At both these points the educators and parents have to understand whether or not their ward is likely to gain from the higher stage of education and also the kind of courses where his gain is likely to be maximum. Usually the decisions are based on subjective impressions and inadequate information. The decisions are not always correct and some of our school failures may be due to wrong decisions at these points.

Past achievement is generally used to predict success

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1. Dave, R.H. and P.M. Patel 'Analysis of Results of Board Examinations (Table 10)., A prepublication draft. Department of Curriculum & Evaluation, National Institute of Education, NEW DELHI.

at the next stage. We have been using it without precise knowledge about its overall predictive effeciency or the most useful cut-off points; the cut-off points are often arbitrary. Besides, there are difficulties in the use of raw scores as available from school examinations. These scores are based on essay examinations with their obvious limitations of low reliability[1,2] due to very limited sampling of content and highly subjective as well as variable scoring on the part of the examiners. Where there are no public examinations, for example, in many cases, at the grade VIII level, the measuring tools also differ widely from school to school making the scores still less usable. Also, there is a widespread feeling among educators and research workers that our examinations are loaded very heavily with rote memory and to that extent are not valid measures of what should be considered as achievement in school.

The reliabilities of prevalent essay type examination cannot be very high, because of limitation of brief content sampling and impressionistic scoring on the part of the examiners. The scores on Scholastic Aptitude Tests would be more reliable information in the hands of teachers and administrators for guiding and selecting students to higher education. These scores will not only be more reliable but also more valid.

If the largely felt impression against our present system of examinations i.e., these tend to measure mainly

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[1] "The reliability coefficient of the full question paper works out to be r_{11} =.6343 only." Gayen A.K. and others, Measurement of Achievement in Mathematics - Report I - p.71/ The question paper under reference is the one for compulsory Mathematics, set in the School Final examination, 1952 by the Board of Secondary Education, West Bengal.

[2] "Even as a test of intellectual attainment of the pupils the validity and the usefulness of the present pattern of examinations has been widely questioned. It has been urged that the present system of examining by means of essay type questions will have so much scope for the subjectivity of the examiner that it cannot be relied upon to any great extent"(Report of the Secondary Education Commission - p.118).

rote memory and very little else is true then we are not selecting necessarily the best students (or all the best students) for recruitment into higher courses of education. The score on the previous examination may give a good prediction for scores in the next examination especially if the ability being measured in both remains the same, that is to say, rote memory to very large extent, accompanied by small amount of other things. But some really good students may be getting eliminated in the process, i.e., the student who is otherwise capable, can think logically and excels in all the higher functions of mind but is not very good in memorizing specially when memorizing is more or less by rote without understanding the meaning very much. By Scholastic Aptitude Tests it is this kind of student that we wish to rescue. It is assumed that the correlation between the scores on Scholastic Aptitude Tests and those on examinations would be fairly high but far from perfect. Therefore, if the scores on Scholastic Aptitude Tests are used in addition to the information available from the examinations, by adopting certain procedures we should be able to select all the best in the student population i.e. those who can excel in the examination on the sheer strength of their memory and also those who are potentially good scholars but do not score as high in the examinations, as some of their friends do.

The Need for a Common Test for Large Geographical Area

The tests as planned are meant for the entire Hindi speaking region which covers four States and the Union Territory of Delhi. There are difficulties in planning and standardizing a test for a large geographical area; also, part of its utility gets limited in the process. Why should we have a common test at all? For long, many research workers in India have been feeling the need for well standardized tests having wider applicability than what is available at present. There are a large number of tests of intelligence (which come very close to tests of Scholastic Aptitude) achievement and also some aptitudes available at various places but their comparability in content as well as in scores is not known to anyone. One of the way out could have been to take a given test and find norms for it for different areas and use that as a common test. But many of these are efforts of individuals and small organisations which could not give to these the time, money and expertese needed for the development of a good test. Also it is anybody's guess whether the tests developed in one part of the country would be valid or equally reliable for the other parts in the country.

There are at present many institutions and employment agencies where recruitments are made on all-India basis. Only a few of these conduct their own examinations which form the common evaluating tools for their applicants, others depend on the results available from public examinations held in different places. These examinations are by no means of the same standard - such is the wide spread feeling among educationists, administrators and employers. There are visible differences of cut-off points. The general pattern of scoring in many examinations is to specify various cut-off points to categorise students in 'divisions' which could be compared to 'grades'. For example, at least 33% marks are required for being considered successful in a single examination,at least 50% to be declared to have passed in second division which we may call grade B and so on. These cut-off points are not the same for all the examining agencies. The second division may begin at 45%, 48% or 50% with different Boards. The situation is further confounded in the sense that it is not known whether percentages could be relied upon as being comparable or whether the broad divisions (grades) should be relied upon for comparative purposes. An examiner may decide in his mind that the script in his hand is by and large a second division script and then assign to it a mark above 50%, 48% or 45% according to the cut-off point for the second division in that particular Board or he may first give the percentage of score regardless of the cut point and let the division get decided by whatever score he gives. It is, therefore, not known as to which of the two kinds of information available to the heads of institutions or employing agencies is more meaningful. A common test could be used as easily available tool, firstly for assessment and secondly for scaling the scores or grades available from different Boards and other examining agencies. The administrators of higher institutions for learning may, for example, on the basis of scaling available on SAT know that a 45% in State X has the same meaning as 53% in State Y and so on. They may then take their decisions which will be more fair to the students coming from different parts of the country. Incidentally,it may be mentioned that the students from some universities and [illegible] Boards have always had this feeling that their Boards having higher standards have given them lower marks in comparison to some of their counterparts who were clever enough to appear in the examinations conducted by Boards and agencies which have low standards and have, therefore, assigned to them a high mark. The latter category tend always to have a gain in the 'stamp' given to them by the Board or the university.

Lastly a common test of Scholastic Aptitude would be a very useful tool in the hands of research workers in the field of education, psychology and sociology for conducting studies covering large areas. Ideally speaking, the common tests for the entire country should be available to the aforementioned agencies. At one stage a common test of intelligence was thought of and to some extent also planned in this Department. The difficulties involved in constructing a test mainly verbal in its contents for populations with many different languages were many; some of these get eliminated in the development of a test in the same language but by no means all of these are sorted out. For example, such a test assumes common experiences over the large geographical area. Even this assumption is somewhat more tenable for smaller geographical area having the same spoken language. It is hoped that with the experience developed in this project it may be possible on a latter date to develop tests in other languages which could be considered comparable.

Preference for Scholastic Aptitude Tests over Tests of Intelligence

For the wider use of the tests it would have been better if the tests of intelligence instead of scholastic aptitude were attempted as the former are used more frequently in research studies than the latter but it seemed more feasible to assume a greater standardization of school experiences which would predominate in a scholastic aptitude test in the large geographical area with which we had concerned ourselves than the assumption of comparable environmental experiences which would be required for the tests of intelligence. Also a fair proportion of the age groups under consideration are still out of schools in India and the test of intelligence being supposedly meant for the entire age group will present many more problems of standardization than the scholastic aptitude tests which are necessarily meant only for the school going populations. Incidentally it has also kept us out from the controversial definitions of intelligence.

Outcomes Expected

It was proposed to develop two tests of scholastic aptitude one each for grades VIII and XI/X which ever may be the end point for the high school. It was decided that there would be at least two forms available at both these levels. This decision was taken keeping in mind the requirements of research [illegible] where two forms are always helpful in various kinds of designs. More than one form of the tests are also helpful if the tests are to be used for grading purposes.

It was decided at this stage that there will be practice booklets to precede the administration of the tests. Practice booklets are particularly important for places and populations which are still not used to these kinds of tests. These were considered very important during the stage of development of tests. To be able to get most valid attempts on the test items, it is absolutely necessary that the children understand clearly the task assigned to them. It is only then, that any meaning can be attached to their attempts. It has been found that at places where objective types of tests are not used very commonly, the scores are rendered more reliable and valid[1] after a sufficient amount of [illegible] practice.

It was envisaged that the tests will be ultimately administered by the teachers and school counsellors etc., therefore, a detailed manual of instructions would be necessary.

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[1] G.R. Ortar was faced with the educational selection and guidance of Israeli children from very varied cultural and linguistic backgrounds. Finding that scores on standard tests were seriously affected by such differences, she introduced a period of coaching and on retesting obtained much improved validities in predicting school achievement. Br. Jr. of Ednl. Psy. June 1963 p.173.

This manual of instruction would include procedures of test administration, Statewise norms, comparability of norms for different groups and other relevant information by way of reliability and validity data as and when available.

A technical report would be made available to those who would be interested in such work.

Chapter II

Study of Criterion, Development and Selction of Item Types

The tests in scholastic aptitude are expected to predict success in future scholastic tasks. One easily available measure of this success is the score in the next higher examination. An attempt was made to understand the nature of the elements (some, if not all) of this criterion with a hope to include such tasks which would measure/predict these elements best. However, the criterion of success in future examinations was not considered sufficiently adequate. There is large spread criticism of examinations held in India both within the country as well as abroad, the general feeling being that these examinations tend to measure more of memory which is not the sole factor in determining the success in future academic tasks, specially if we consider success broadly and not measure it only in terms of scores obtained in examinations. Frequently, large number of cases are quoted of pupils who have not been very successful in the examinations but have later made noticeable contributions in creation, assimilation or dissemination of knowledge. It is likely that these are exceptional cases and, being in a sense dramatic, are noticed more and therefore quoted more frequently while a large majority who do not show any such noticeable deviation is forgotten. On the other hand, if there is some truth in the statement that the examinations measure more memory than anything else, this seems to be an inadequate criterion for the development of Scholastic Aptitude Tests.

An attempt was made to consider a second criterion namely, 'scholarship' to the extent it is not measured by the traditional public examinations. It is admitted that the criterion is vague and difficult to define. It will be still more difficult to demonstrate the validity of the developed tools vis-a-vis this criterion. The first criterion is something concrete and readily available. The validity of the tools developed can be checked against the scores achieved by the students in the next public examination. In the case of the second criterion even if there is some life in it, one will have to wait for years to accumulate data to demonstrate the validity of the tools. The research team, however, was not deterred from considering this criterion, at least attempting the analysis to see if there is anything worthwhile which could be included in the tests. This thinking was strengthened by the fact, that the examination scores being readily available can always be included in any predictions to be made, (provided the reliability is acceptable) and more of 'additional things' should be included in the tests to get best predictive efficiency from combined use of school marks and scores on SATs.

Analysis of Criterion

The first step was to study the two criteria and analyse the underlying variables. For studying the first criterion i.e. scores in the examinations, two approaches were made. A good school in Delhi was contacted with a view to get assistance from secondary school-teachers in locating the variables which determined high/low scores of the students. The aims and objectives of the Project and the particular task were made clear to the principal of the school and his approval was obtained for carrying out this bit of work in his school. It may be added that the principal was not only agreeable but highly enthusiastic in helping the project team to carry out its work, as he thought this would enhance his own understanding as to what makes the students score high or low. A meeting was held with the principal and the members of the staff were the Principal Investigator explained the nature of the task to be carried out. The school had been approached soon after the mid-term examinations of November 1963; the teachers were asked to pull out 5% of the scripts assigned the highest and the lowest marks. The scripts were to be used as guides in analysing what determined a high or a low score. It was pointed out to the teachers that very often it was the global impression presented by the answer that determined the score and that most of us, teachers, do not analyse the questions before giving a score into such elements as were desired by the research worker, but the possibilities of such analysis existed and could be explored. It was made clear that in case a teacher thought that a high or low score was really undeserved such a script was to be dropped quietly as our purpose was not checking the reliability of the scoring but understanding the underlying determinants of high/low scores. A period of 10 days was given to the teachers to carry out this work. After the lapse of the agreed duration, the/ /investigator visited the school again and met the teachers this time individually. Many handed over brief written statements, others wanted to discuss their comments whith the investigator.

The high and the low scoring scripts were also collected from the school and studied by the project staff to discern such variables, if any. From the office of the Registrar of Delhi University some scripts of the final public examination held for the degree of Bachelor of Arts in 1963, were borrowed and studied by the project staff. These scripts were drawn from various subjects which the project-staff felt it could study competently, namely English, History, Psychology and Mathematics. The team while studying the school and the university examination scripts kept its notes on what it thought could have determined a high or a low score and all these elements were considered together.

In spite of the instructions to the teachers that knowledge is to be kept apart, this variable loomed very large with the teachers; it was simply ignored from consideration. The following are some of the variables isolated by teachers and the staff of the project on which scores seemed to get determined: (i) (a) Mechanics of writing, i.e. spellings, sentence structures, paragraphing, sequence of ideas (b) handwriting (ii) Fluency of ideas, (iii) Speed of writing (iv) Brevity of writing, particularly use of single word or a good phrase to express a whole idea; In mathematics and sciences avoiding unnecessary elaborations and concrete language (v) Insight into the problems including good understanding of the scope of the task assigned (that is to say, the scope of the question asked), (vi) Reconstructing the problem wherever necessary and ingenuity in solutions (vii) Ability to apply rules, specially in mathematics, (viii) Ability to reason with abstract symbols, (ix) Originality and quality of ideas (x) Comprehension - as evidenced in summarising the material. (xi) Consistency in ideas - in case of low scores inability to stick to a point of view and present an argument consistently. (xii) Ability to state a principle in general terms as contrasted with concrete language.[1]

Analysis of Criterion 2

In the school mentioned above, the teachers were asked whether they had met students in their teaching experience, who looked promising to them but who did not get scores as high as some other students did. It may interest the reader that not

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[1] (For example the condition that the two straight lines given by $AX^2 + 2BxY + CY2 = 0$ will be at right angles is : the low scoring students tended to mention $A + C = 0$, high scoring students tended to say the coefficient of X^2 + coefficient of $Y^2 = 0$).

only in this group but in other groups also, to be described later, there was unanimous agreement, that there always were students about whom the teachers had the feeling of good promise in later academic work but who did not show signs of immediate success in terms of high scores. This point was discussed later on in two other groups apart from amongst the research team itself, one was a small group of experienced secondary school teachers from Delhi and the second
/Most of the students in this Master's Course /of Education (1963-64) run at the CIE, DELHI/
was the students of Master Course/have had experience of teaching, this being the requirement for admission to the course. There was no exception to the general feeling that such cases are found frequently.

The teachers of the school mentioned above were asked: 'what makes you think that a student was a good scholar when he was not scoring very high?' The same question was posed to the group of teachers from a number of secondary schools and to the students of the Master of Education course. In all these three groups the responses were obtained in writing. The theme was also discussed individually with the teachers of the school mentioned above; in a group with the teachers from other schools, and not discussed at all with the students of the Central Institute of Education. Meaningful variables as mentioned by one or more people are listed below:

(i) Intelligence (ii) good retention (iii) interest in the subject/subjects (iv) inquisitiveness (v) better concentration (vi) initiative (vii) critical questioning (asks intelligent and probing questions) (viii) precision in thinking and expression (ix) ambitions of academic work (x) logical thinking (xi) greater independence in his work (xii) quick grasp of things (xiii) ability to see relationships (xiv) application of generalizations to particular cases (xv) clear expression in speech and writing (xvi) originality in thinking (xvii) capacity for abstract reasoning (xviii) persistence and swiftness in thinking (xix) good comprehension (xx) quick grasp of subject; quick in response and reactions (xxi) good knowledge of language (xxii) relevance (xxiii) broader interests.

The task before the project-team was to select such variables which were meaningful with regard to the criteria mentioned above. Obviously, our domain was restricted to cognitive abilities. All personality variables like interests, independence, ambitions (greater motivations) etc. were ruled out. After lengthy deliberations and discussions it was agreed to explore the following for inclusion in the tests:

1. Verbal Ability
2. Problem Solving: (a) pertinent questions (b) scope of the problem (c) logical consequences (d) seeing relationships.
3. Concept Formation
4. Expression: (a) conciseness of expression (b) logical sequence of ideas (c) fluency of ideas (d) word fluency (e) speed in writing.
5. Memory - (a) memory for connected ideas (b) memory for discrete ideas.

These were further studied and some were rejected/ limited for reasons of practicability.

In Problem Solving, some of the variables were to be tried in a complex situation i.e. straight on a test of problem solving. However, separate tests were to be developed on 'seeing relationships' and 'discovering the rule'.

Expression was limited to written expression only; 'logical sequence of ideas' was dropped as it was felt that time required in attempting a test with given choices could not be afforded.[1] On the other hand, the scoring of a free response type situation would be subjective, non mechanical and time consuming. Speed of writing although considered important by many teachers also got eliminated from considerations. It was felt that a pure speed factor was of little meaning here. It was the speed of recall, selection/rejection of pertinent material and writing the same that together mattered. It was felt that a good part of it would get reflected in scores on any test and that a pure speed test was not needed. After elimination of these variables the broad heading was revised from expression to fluency.

Under memory, it was decided to test only immediate recall.

It was felt that 2 and 3 could be broadly summed up under 'Reasoning' leaving us with four broad areas, namely, Verbal Ability, Reasoning, Fluency and Memory to be tested.

Consideration and selection of item types to measure abilities mentioned above

Verbal Ability:

The verbal ability tests included here measure mainly ability to read and comprehend and only indirectly to express oneself; that is to say, these are tests on ability to understand written material; and only to the extent that, richness of vocabulary is predictive of good written expression, these tests can be considered as tests of written expression. The following item types were considered and/or tried out

Reading Comprehension: A passage was provided for reading and multiple choice questions were asked on the content of the passage. Care was taken not to ask questions as could be answered by picking out phrases and words directly from the paragraph. The questions mainly concentrated on central theme, implied meanings and only occasionally on the meaning of a

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[1] This variable did seem to have a close relationship with scoring patterns. [illegible]

The questions of the type mentioned above are time consuming both in the preparation of the test as well as in the taking of the test. The evidence obtained in terms of number of items is far too little in proportion to the time spent by the candidate on the test. It is also the experience of some of us that the students feel shy of reading (specially at the trial stages) so much material which is occasionally pretty heavy to read and understand. To supplement this test another type was considered and accepted for try out.

Sentence Completion: An omitted key word from a given sentence or group of sentences was to be selected from given five alternatives, each of which would fit grammatically but only the correct answer would make the sentence meaningful and acceptable in idea. The students could respond to this item type very much faster than to paragraph reading.

Synonyms: It was felt that a large vocabulary is helpful in understanding any written material and is also indicative of possible good written expression - good in the sense of giving greater power of expression. A multiple choice type of test was prepared for testing vocabulary. Difficulty was experienced in inclusion of abstract words in the test. While the difficulty of language is necessarily associated with the abstract words, in the simple test type which we wanted to adopt i.e. stimulus word followed by five alternatives including one correct answer proved difficult for such words. Hindi language is not at the stage of development where one could find four or five words which would be close enough in meaning to the correct answer to function challenging distractors but not be considered correct answers. An attempt was made to prepare a sub-test giving the meaning of abstract words by full statements. A draft of sample items was prepared and considered by the research team. Invariably the team found it difficult to agree on the exact statement of the correct answer. The writing of the item was also difficult and time consuming. In view of the first factor mentioned it was decided to drop the item type. Needless to add that this should be reconsidered at some later stage of the improvement of the test.

Antonyms: This sub-test was planned to supplement the test in synonyms. When a word expressed a whole idea, it was found difficult to find a good synonym; it was however easier to get evidence on its comprehension with the help of antonyms.

Four item types then, namely, reading comprehension on the passages, reading comprehension by completing the sentences, synonyms and antonyms were selected for tryout.

Reasoning:

The following were considered for inclusion in the first tryout:

Three types of analogy items were considered (i) Given one pair of relationship, out of the given five relationships the student was to select the one which matched the given relationship.[1] It was felt that this type of reasoning included greater analysis of the relationship of a given pair as expressed in the selection of the similar relationship. It was also felt that the item difficulty can be increased in this type of item than in the simple analogy were the fourth correlate is missing.

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[1] For example, Fertilizer is to Yield as (i) Education is to Knowledge (ii) Intelligence is to Understanding (iii) Medicine is to Disease (iv) Money is to Research (v) Population is to Poverty.

A draft was prepared and administered to the students of grade XI of some local schools i.e. to a sample of the population on which the test would be applicable later on. It was found to be too difficult. To understand the practicability of this type further, test was administered to a few students and adults individually and they were asked to analyse what led to the correct response. It was found that most students as also the adults, failed to analyse the relationship fully and went invariably on some minor association. On the whole the item type was not considered practic[illegible] (due to large number of failures) and was dropped. The second type considered in analogy was giving any two of the four words and leaving out the other two providing alternatives for the missing words.[*] This one also proved difficult for high school population. Also the mental processes tested were not liked by the research team. The item type was dropped. The traditional analogy where the fourth correlate is missing was finally accepted for both grades VIII and XI.

Numerical Series: A test of number series in the traditional style where sufficient number of terms of a series are given for understanding the implicit rule and students are asked to write the next two numbers was considered and accepted.

Classification: For grade VIII the traditional classification test of pointing the odd man out was accepted. For grade XI another type was tried and found satisfactory. Here, two groups of words were given each defining a class, or an idea. A list of question words was given to be assigned to class I or or class II.[1] To start with, this test was called Concept Formation, but to use the same names it is now named as 'classification' from which it really is not different but only more complex. [illegible]

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[*] For example, Request is to A as B is to Force A1 - Ask, A2 - place, A3 - Argue, A4 - Order, A5 - Tell; B1 - Bother, B2 - Persuade, B3 - Tell, B4 - Punish B5 - Obey

Problems in Arithmetic: These were included for both the levels. Computations were kept to the minimum and reasoning was emphasised.

Similarities: Test under this name was included for grade VIII. The students were required to point out (by selecting one out of five given answers) in which way the two given words were similar.

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[1]

Class I	Class II	Question Words
Mother	Auntie (Father's younger brother's wife.	Mother's mother Brother's daughter
Grandmother	Auntie(Mother's brother's wife)	Mother's sister
Aunt(Father's sister)	Sister in law (Brother's wife)	Father's elder brother's wife
Sister	Wife	Daughter in law Sister's daughter

Syllogisms: These were considered for inclusion in test at grade XI. A draft was prepared and tried out on a group of students. It was found that beyond a certain simple groups of syllogisms the students could not work with it. Even from among the adult group the small number on which the test was administered, the test was being answered reasonably and correctly only by those who had had specific training in logic. The item type was dropped.

Another item type under the same head i.e. syllogism was considered with a view to give simple type of syllogism only but by presenting concrete and non-sensical statements.[1] The draft as tried out was found too distracting for the young children who felt very amused at the odd things these statements said and found it difficult to concentrate on the task. They also showed signs to depend on the literal meanings of the statements and strike all absurd relationships given. The item type was dropped. Another item type considered was decoding.[2] This item type was rejected by the research team itself mainly on the ground that rules were understood by trial and error; certainly it involved hypothesis formation and verification of hypothesis. But opinion was divided on its utility.

Memory:

Under memory the following item types were considered and accepted.

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[1] For example 'Some carrots are tables. All tables are buffaloes. Alternatives: (i) No buffaloes are carrots (ii) Some buffaloes are not carrots (iii) Some buffaloes are carrots (iv) All buffaloes are carrots (v) Some carrots are not buffaloes (vi) None of the above.

[2] For example, 'following a certain rule the word RESPECT can be written as ECTRES applying the same rule how can the word "BELIEVE" be written in code language?'

Memory for Associated Ideas: A long paragraph was to be given to the students to study with explicit instructions to memorize things given. The passage would be withdrawn and a number of multiple choice questions would be given as test of memory.

Memory for unconnected ideas: (a) A number of sentences unrelated to each other would be given for memórising and the papers would be withdrawn after some time. The sentences were then to be given in a jumbled up form with some words missing in each sentence for which alternatives were to be provided to indicate the correct word. (b) Another version of this very test was that the words in the testing situation were to be written by the children. No choices were given. (c) The fourth test consisted of simple associations between words (names of men and women), objects and numbers, numbers and numbers, each to be given separately for memorizing and then one set given in an order different from the one given for memorising. The student was required to give the associated pair in the blank provided.

Fluency:

Under flunecy the following were included.

Fluency for words: Words beginning or ending with a specified letter were to be written by the students.

Idea Fluency: (a) Ideas connected with a particular topic or words which could take a specified adjective or things having a specified shape etc. were required to be written. (b) Another test in Idea Fluency required production of as many ideas as the students could on a given topic like 'Tea Party' etc.

Final Selection of Item Types:

All these item types were retried somewhat systematically on a small sample of children in Delhi. The objectives of this try out were as follows:

1. To estimate the difficulty level around which the items should be written. It was being experienced again and again by the research team that the exact idea of the level of difficulty of items which would be suitable for the two grade levels was not very clear to the team. It was being argued back and forth without much actual knowledge of the field situation. Existing tests were consulted, but many of these were quite old. There was a strong feeling that conditions were changing very fast and the difficulty level presented by these items was not necessarily relevant. Moreover, majority of tests consulted being 'intelligence tests', these represented age levels and not grade levels. It was considered best to go out and find from the prospective respondent what was the operative level of difficulty for these children.

2. To test the practicability of the item types accepted. Although some item types were tried out during this interval and rejected or accepted but this was not done systematically for all item-types. Only those on which members of the team disagreed with each other were taken to the field. At this time all the item-types were tried out for testing their workability.

3. To get an idea of the kinds of instructions to be used. The amount of practice required for each item type before the items were administered for item analysis.

4. To get an idea of the predictive efficiency of the variables being tried out viz-a-viz the examination marks as well as assessment of criterion II i.e. good scholarships by the teachers.

Seventeen item types were tried out on approximately 200 students for each of the grades VIII and XI of a local school. On studying the results available from this study it was decided to drop the tests in memory and fluency. At the grade VIII level the four tests in memory did not look very homogenous. Out of six mutual correlations three were nearly zero. With aggregate of school marks, all tests had significant correlations, though not very high (ranging between .24 to .38). The test which was expected to have maximum correlation showed least correlation with the school subjects. A high correlation was expected, as this task namely memorising a long passage looked very much similar to the school work required but for the fact that the memory being tested here was immediate recall. At grade XI, two of these tests had significant but low correlations with the school marks (.27 and .25). In any case, the tests were given up because the administration was found rather difficult, the timings had to be observed very closely, the children did not put down their pencils quickly as required to. It was foreseen that such a test would be still more difficult to administer when the test administration was entrusted to the teachers.

The tests in Fluency correlated very low with school marks in both grade VIII and XI. The difficulties of scoring were tremendous; administration was not easy either. If little time was given to the children it tended to measure more speed than fluency, if sufficient time was given problems of discipline with young children predominated the classroom; the children got restless, tried to copy each other's material and so on. Scoring was fairly cumbersome and time consuming. Ultimately it was decided to leave all tests under this category.

It was felt, however, that memory for associated material should be considered again at a later stage. If possible, the material should be given in a-dvance so that the memory tested is not immediate recall but similar to what is expected in school tasks. For grade VIII the test in problems in arithmetic looked the best predictor of the school marks followed by reading comprehension tests (sentence completion type) and memory for related material. In grade XI the best single predictor was the test on Concept Formation (Classification) followed by problems and reading comprehension (passage type) and problems in arithmetic. It was also discovered that problems in arithmetic need to be made more challenging, therefore, area of content was extended from arithmetic to algebra and geometry. Since the two tests giving the highest correlation came under the category of reasoning, another subtest in reasoning namely 'data-sufficiency' for grade XI was included for the tryout at item analysis stage.

With this knowledge the first drafts of items were prepared to be tried out for item analysis in the States.

CHAPTER III

Item Analysis and Preparation of Final Forms

Item Analysis

More items were written for each of the type selected so as to have sufficient number to be able to prepare two parallel forms at each of the two levels. One difficulty which the research team faced and consistently discussed was deciding whether or not a particular word or object being used in test items was known to the other Hindi speaking regions of the Country. Our joint experiences were strongest in knowledge about Delhi and Uttar Pradesh, somewhat limited for Bihar and Rajasthan and practically nil for Madhya Pradesh. To get over this difficulty, the test for synonyms consisting of 600 words and an additional list of words and objects - 61 in all was sent to some schools in the States of Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh, requesting the teachers to cross out the words which they thought were not known to the age group 13 to 16. These words were avoided in writing test-items.

The items after needed editing were frequently tried out on very small samples for improvement, only in rare cases items went as first drafts for the larger tryout.

Different subtests were printed separately. For each of the two grades VIII and XI, 9 to 10 sub-tests were tried out respectively. The number of items which were administered at this stage was as follows:

Table I

Number of Items Tried Out

	Grade VIII	Grade XI
Synonyms	100	95
Antonyms	75*	84
Sentence Completion	68	75*
Reading Comprehension	70	96
Analogy	70	75*
Problems in Arithmetic/ Mathematics	68	100
Number Series	75*	70
Classification	74*	50
Similarities	70	-
Data Sufficiency	-	63
Problems	-	60
	670	768

The sub-tests were arranged in four groups to ensure that in a single sitting only one and a half to two hours of time is required from the children. The tests were administered in two days' time using four sessions on two consecutive days with a break during the two sessions of a day. The same were preceded by the practice booklets, where for each sub-test, detailed instructions with illustrations were provided and also exercises were given for students to attempt.

In the administration of the practice booklets sufficient care was taken to see that all children understood the nature of the tests. The teachers read out the instructions and illustrations for each subtest, the children were allowed and encouraged to seek clarifications. As they attempted the practice items, the teachers watched for correct marking of the answers. If necessary, instructions were repeated. When all the items of a practice booklet were attempted, the correct answers were announced. The practice booklets were always administered a day before the tests were and children were asked to take them home and study them, if necessary. They were forewarned that similar tests would be administered the next day but instructions will not be repeated.

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* In all these tests, considering cost of punching and processing only 72 items were analysed for getting item-statistics.

In the test booklets the same instructions as were given in the Practice Booklets were repeated on top of the each test but this time the students were left to read the instructions by themselves. No further explanations were offered. The timings for reading the instructions and for attempting the items were given separately. Ample time was provided to the children for attempting all the items. Generous time limits were fixed for each sub-test with instructions to the Supervisors and Test Administrators that the same might be further increased by 5 to 10 minutes or even more in some cases as in the case of test in problems in mathematics so as to ensure maximum number of attempts by the children. It is hoped that the speed factor was eliminated to a very large extent.

Sample for Administration of try-out forms

The samples were selected from each of the four States and the Union Territory of Delhi so as to include boys, girls from both urban and rural areas. No attempt was made to make the sample-design very sophisticated, it was felt to be unnecessary at this stage. However, due to vast expanse of geographical area, it was thought proper to get samples from more than one pocket in a State. At least three to four major centres, fairly widely scattered geographically were chosen in each of the States. In Uttar Pradesh the four major centres were Lucknow, Kanpur, Varanasi and Almora[1]. In Bihar the three major centres were Purnea, Patna and Ranchi. In Rajasthan these were Bikaner, Ajmer and Udaipur; in Madhya Pradesh, Gwalior, Bhopal and Raipur. In Delhi various areas or localities were included so as to cover all kinds of groups. In and around each one of these centres mentioned, four types of high/higher secondary schools, namely, schools for boys and girls in urban and rural areas were selected without much knowledge about the schools (from the lists of schools available from the various Directorates of Education). The samples for grade VIII have, thus mainly come from high and higher secondary schools, except in the case of Madhya Pradesh where the school structure is such that many high/higher secondary schools did not have the middle classes attached to them and separate middle schools had to be included in the sample. The number of schools in the States where testing was carried out is as follows:

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[1] Finally tests could not be administered in Almora.

Uttar Pradesh - 12; Bihar - 12; Rajasthan - 10
Madhya Pradesh - 19; Delhi - 12;

The number of children under each of the categories mentioned above are given below:

Table 2
Number of Children Tested in Each State

State	Urban Girls	Urban Boys	Rural Boys	Rural Girls	Total
Delhi	307 229	287 225	300 137	253 107	1,147 698
Uttar Pradesh	558 442	361 431	316 238	20 -	1,255 1,111
Bihar	528 171	406 338	184 79	139 95	1,257 683
Rajasthan	150 294	407 353	111 135	141 60	809 842
Madhya Pradesh	482 330	496 496	315 339	170 66	1,463 1,231
Total	2,025 1,466	1,957 1,843	1,226 928	723 328	5,931 4,565

* In each cell the figure on the top refers to sample size for tests for grade VIII and the second figure to the sample size for tests for grade XI.

Difficulty values and discriminating indices were obtained for each one of these groups i.e. for different strata in different States separately. Only in some cases the data were further reduced at the stage of punching and processing. This was found necessary to cut down the time and expenditure involved but it was felt that it is not likely to affect the selection of the items as the selection was based on a large number of repeated indices available from various groups. The difficulty values were the percentages for the keyed correct answer of the item calculated by the formula $\frac{R}{N - NR}$ so as not to make the item look more difficult because of its placement. The discriminating indices were read from Davis' Chart using percentages of successful attempts of 27% of the high scorers and low scorers for each single sub-test In determining the upper and the lower group, correction formula was not used for scores as, by and large, the groups would remain the same except for very marginal adjustments. However, since Davis particularly recommends the use of correction formula for the pass percentages for high and low groups for entering the figures in the Chart, such percentages were corrected for guessing by the formula $\frac{R - \frac{W}{n-1}}{N - NR}$

Item - statistics were available on two to four groups in a single State. It was earlier planned to get item-statistics on each of the four strata in a State. This did not prove possible because of small sample sizes in some strata. This is specially true of children of grade XI and also of rural-girls samples. In some States the total number of girls studying in grade XI in rural areas in itself is so small that it hardly needs any special attention. The strata were combined keeping in mind the variable and the types of differences which were likely to be prominent. For example, in test of problems in mathematics the merging of rural urban groups was thought more appropriate but boys and girls were kept apart as the difficulty values of the items were expected to be more widely different for boys and girls, specially in view of the fact that only a negligible proportion of girls offer higher mathematics. At the secondary stage, some have already developed inhibition towards working with figures. When environmental experiences seemed important, rural groups were kept separate, wherever possible.

At the grade VIII level, samples were fairly substantial and much merging was not needed.

On the Use of Information Available on Items

For each stratum in each State the following information was available:

(i) Percentage of response of high scoring and low scoring 27% as well as the total group for all the alternatives in case of multiple choice items. Proportion for 'non-response' and 'not-reached' were also available. Percentage of correct, incorrect answer, no response and proportion 'not reached' in case of completion type items were available. Incidentally only the number series were the completion type items.

(ii) The difficulty value in terms of pass-percentage of the total group for the correct response - as available from (i).

(iii) Discrimination index as read from Davis' Chart.

For each item the data for all the strata in a single State were made available on a single sheet. These were studied to judge the acceptability of difficulty values and discrimination indices (the limits for which will be specified a little later) and also to notice any stratum differences over the items. A difficulty arose here as to what difference should be considered as due to a bias in the item and what may be attributed to a real difference in the ability level. The data seem to suggest that the assumption of equal ability levels for all strata/States could not be held for whatever reasons it may be. This view was supported by the results available from the sub-tests - that is to say if a particular State or stratum tended to have higher mean scores for practically all the tests one could not stick to the assumption that the differences were due to bias in item writing. It looked more tenable that there were some essential differences in the developed ability of the children. For deciding the direction of these differences the mean scores on the sub-tests for the strata were studied in each case and it was agreed upon that the response pattern similar to the pattern of mean scores would be considered as free from bias in the item. Any deviation from this pattern may be considered as indicative of bias. To illustrate the point concretely, on the test on Antonyms in Delhi the averages recorded for the four strata were as follows:-

Urban Girls	Urban Boys	Rural Boys	Rural Girls	Total
49.10	44.60	41.60	37.55	43.41

It was then accepted that urban girls would have maximum pass-percentages and the rural girls the minimum. The boys' groups fitting in the order as indicated by the mean scores. Any item which recorded a higher pass-percentage for urban girls in comparison with urban boys was not noted for girl-boy difference but if an item recorded higher pass percentage for boys in comparison to girls, a boy girl difference was recorded. Same rule was followed in studying the difference over States from State-data-sheets.

Thus for each State a note was taken for the acceptability or otherwise of the item; also differences in strata were noted. If an alternative did not function or tended to distract the high group this was also recorded on the sheet. All this information from all the States were further transferred in a tabular form for each item on a single sheet as illustrated below:

Antonyms:

Item No.2

	UG	UB	RB	RG	
Delhi	79 35	79 23	63 31	53 28	B/G
Bihar	52 37	60 49	78 25	51 33	B/G
M.P.	47 15	73 35	62 35	47 26	B/G
Rajasthan	65 23	71 34	59 40	---	B/G
U.P.	44 36	69 39	74 49	---	B/G

Favours boys, otherwise acceptable.

The figures on the top left corners give pass-percentages and the figures in the right bottom corner give discrimination indices. A noting like B/G means boys are doing better than girls. In case an alternative was found unsatisfactory it was also recorded against the particular state as alternative A etc. These tables were then scrutinized for final selection or rejection of the items.

Criteria for Selection of items

In case pass percentages showed large variations over State and strata that item tended to get eliminated. For an item the pass-percentages between the range 25 to 75% were considered acceptable. Although this rule was followed generally exceptions were made in a very few cases for values higher than 75% or lower than 25% in some States or strata. This necessity arose as two of the extreme States, namely, Delhi and Bihar did record quite a few differences. To make available for Delhi children some items of lower difficulty values, it became necessary that items having lower pass percentages than 25% for Bihar were included. Similarly to make available some easy items for the State of Bihar it became necessary that some items which showed high pass-percentages for Delhi also got included. In any case the number of such items is not very large. For discrimination index the general rule was that all values as read from Davis' Chart should be larger than or equal to 20 for the acceptability of a particular item. Since the number of observations for each single item varied from 10 to 18, occasionally one or two lower discriminating indicate were ignored, specially in cases where item difficulties, both in the range and in the central value, looked highly acceptable.

In the selected items, if need was felt to change on alternative it was changed. It is pointed out that the items with changed alternatives have not been tried out again and new item statistics might now be different. The same have been obtained from the data obtained later and are given elsewhere in the report.

Preparation of the Final Forms

Items were selected on a large number of indices both for the difficulty and discriminating values. Although it was considered good by the research team from the point of view of stability of information but for dividing the items into two final forms, this information was too cumbersome to be used. Single indices of item difficulty and discrimination were worked out for each item as follows:

For the difficulty values an unweighted mean of passpercentages was accepted as the difficulty value of the item.1 for the discrimination index the median value was used as the single index.

Using these two indices selected items for each sub-test were plotted on a graph, the closest appearing pairs were encircled and the items were then randomly assigned to Form A or Form B.

It was assumed that items with changed alternatives or those showing strata differences will be and large get divided evenly in two forms. Following is the information (as available from item-analysis) in forms A and B.

Table 3

Division of Different Types of Items as obtained in the two parallel Forms.

	Form A		Form B	
	VIII	XI	VIII	XI
Items which seem to favour urban children	8	-	8	-
Items which seem to favour rural children	1	-	-	-
Items which seem to favour boys as against girls	5	-	5	-
Items which seem to favour girls as against boys	2	2	2	3
Items in which one (in rare cases two) alternative has been changed	37	22	46	29

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1. Mathematically one would consider the weighted mean as a better average than the unweighted mean. It was observed that the sample sizes of the data which was actually processed did not very much and the number of observations being large i.e. varying from 10 to 18, them weighted mean did not differ much from the weighted mean. A number of concrete cases were calculated to note the difference between weighted and unweighted means. In most of these observations the recorded mean difference was less than 1.00. As in dividing the items in two parallel forms such differences would get igrnored it was considered worthwhile to save the effort and time involved in calculating the weighted means.

2. It was found necessary at this stage to divide the total test into two for convenience of administration. Division in V and N forms seemed most practical and sensible.

The number of items in the final form under each subtest are as shown below:

Table 4

Number of Items in Each Subtest

Form V^1 (A and B)	Grade VIII	Grade XI
Synonyms	29	24
Classification	17	14
Analogy	20	16
Reading Comprehension(Passages)	19	22
Antonyms	18	24
Similarities	16	-
Sentence Completion	21	20
Form N^1 (A and B)		
Problems in Arithmetic/Mathematics	20	20
Number Series	20	20
Data sufficiency	-	16
Total	180	176

Practice booklets did not need very large scale changes. Instructions were revised, wherever necessary. For each administration, practice-booklets are still two in number, with a common answer sheet.

Fixation of Time Limit for the Final Forms

During the initial try out phase it was observed that the Delhi boys and girls worked faster than their counterparts in other States. Bihar boys and girls were found to be slowest of all. In the following tables Bihar and Delhi boys of grade VIII and XI have been compared on two tests i.e. on Antonyms and Number Series.

Table 5 (a)

Data on Differences in Speed of Work of Children.

	Urban Boys - VIII Number Series - Total Time - 100mts. No. of items 72'		Urban Boys -VIII Antonyms Total Time 30 mts. No. of items 72	
	Delhi	Bihar	Delhi	Bihar
Item No. on which 1st. 'not-reached' case occured.	34	32	72	52
Percent of 'not reached' cases on last item	12.3%	34.8%	0.7%	4.9%

Table 5 (b)

	Urban Boys - XI Number Series Total Time - 90mnts. No. of Items 70		Urban Boys XI Antonyms Total Time - 30 mnts No. of Items 84	
	Delhi	Bihar	Delhi	Bihar
Item No. on which 1st 'not reached' case occured	35	10	66	56
Percent of not-reached case on last item	47.4%	42.8%	1.4%	8.3%

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1. As available from punched data.

In both tables 5 (a) and 5 (b) it can be seen that first occurance of not reached case was consistently early in case of Bihar boys as compared to Delhi boys. Beside percent of not reached cases in last item were also higher in case of Bihar Boys. In table 5 (b), however, there is one reversal of this trend. There is greater percent of not reached cases in Number Series test among Delhi boys than in Bihar boys. This reversal is more apparent than real. For 65th item, i.e. all but 5, percentage of 'non-reached'is 28.5 for Bihar and 21.6 for Delhi.

Upto this point the percentages are consistently lower for Delhi. Although the above comparisons were made on two tests in each of grade VIII and grade XI only, but the same general pattern was noticed in all other tests.

Assuming that the boys and girls from other States would be somewhat slower than Delhi children, it was decided to fix the time limit of the tests in such a manner as to allow reasonable time to the slowest of the students for attempting a large number of items.

The tests were administered on the boys of a Delhi School (Government Higher Secondary School, Model Town, Delhi-9) for estimating time requirement of the Delhi students. The following procedures were adopted: grade VIII and grade XI of the school was selected for test administration. Practice Booklets were administered strictly in accordance with the procedures as laid down in the manual of general instructions. On the next day the tests were administered. The forms A or B were given to alternative students sitting in a row. Testing procedure was the same as laid down in the manual of general instructions except for a single point, the children were instructed to raise their hand as soon as they had finished answering the questions. Whenever any student raised his hand the test administrator went to his seat recorded the time of submission of the answersheet and collected back the test booklet as well as the answersheet.

The students who received AV in first testing session received AN in the second session and those who had received BV in the first session received BN in the second.

Total time taken in attempting all the items of AV and BV forms by VIII grade and XI grade students is presented in Table no. 6 (a) below:

Table 6 (a)

Time taken by a Group of Children in Atempting the Tests

Time in Minutes	VIII AV f	VIII BV f	XI AV f	XI BV f
111 - 115	0	0	0	1
106 - 110	0	0	1	2
101 - 105	1	1	0	2
96 - 100	0	3	0	1
91 - 95	8	4	3	3
86 - 90	3	1	8	2
81 - 85	2	3	4	5
76 - 80	8	3	5	3
71 - 75	6	2	3	3
66 - 70	2	7	3	1
61 - 65	1	5	0	2
56 - 60	4	4	0	0
51 - 55	3	1	0	0
	N = 38	N = 34	N = 27	N = 25

Total time taken in attempting all the items of AN and BN forms by grade VIII and grade XI students is presented in Table No. 6 (b)

Table 6 (b)

Time in minutes	VIII AN f	VIII BN f	XI AN f	XI BN f
91 - 95	0	0	2	0
86 - 90	0	0	0	0
81 - 85	0	0	0	3
76 - 80	0	0	6	3
71 - 75	0	0	8	5
66 - 70	2	4	5	3
61 - 65	7	3	6	9

Table 6(b) Contd..

56 - 60	4	3	0	2
51 - 55	3	11	0	1
46 - 50	6	2	0	0
41 - 45	4	3	0	0
36 - 40	2	4	0	0
31 - 35	1	2	0	0
26 - 30	1	1	0	0
21 - 25	0	0	0	0
	N = 30	N = 33	N = 27	N = 27

After considering the total time taken by this sample of Delhi boys and keeping our previous experience of comparative slowness of boys and girls form other States in mind total time for each of the forms was fixed as follows:

2 hours for Form V and 1 hour 45 minutes for Form N for grade XI, 2 hours for Form V and 1 hour 30 minutes for Form N for grade VIII.

Chapter IV

Administration of Final Forms, Data on Norms and Reliability

The tests as printed in their final forms consisted of the following for each of the grades:

1. Two practice booklets with a separate but common answer sheet for both the forms.
2. i) Form V (A&B) with a separate answer sheet.
   ii) Form N (A&B) with a separate answer sheet.

Although practice booklets had a separate answer sheet, these were categorised as consumable. As mentioned earlier, the practice booklets are left with the children to enable them to study and understand the instructions to the extent they need repetetion and/or practice. It was also thought that ultimately, these can become useful handouts to prospective users. The test forms were considered reusable and a smaller number of these were printed in comparison to their answer sheets.

As laid out in the manual of instruction in each case (i) the practice booklets were to be administered by the teachers a day prior to the administration of actual tests (ii) Form V would be administered in the first session next day and Form N during the second session. A school could, if it so desired, adminster form N on the third day but rarely was it arranged this way. In fact, we would have liked the N form to be administered on the third day but the procedure was changed because of pressure from schools to get the work done in as small a period of time as was possible.

When these tests would be used for guidance/selection purposes, the same would be administered to the children who have just completed schooling upto grade VIII or X/XI which ever may be the end of high school.[1] It was considered right to administer the tests for Norms as close towards the end of the academic year as was feasible. In most States the annual school as well as public examinations are conducted usually during March - April; therefore, it was decided to administer the tests for norms during December-January. Only in the State of Bihar these were to be administered a little earlier as the students there are allowed to discontinue school and study of their own in preparation for the final examination.

Sample for Norms

In another project, namely, 'A Survey of Secondary Schools in India' being worked at a little ahead of this project, a ten percent stratified random sample of schools was drawn - the strata being rural/urban, government/non-government, boys/girls and high/higher secondary schools. This seemed to fit in with the requirements that we had in mind and it was decided to adopt this sample for final administration of the tests. The factors that led us to this decision are laid out below:

(i) A similar stratified random sample of schools was needed by us for norms.

(ii) As the National Institute of Education had already developed some kind of rapport with these schools, these were likely to respond to our request more easily than a set of new schools.

(iii) It saved time in selecting a fresh set of schools.

(iv) It would give additional information about the student population of these schools which could, at a later stage be studied along with the school variables on which data were available on 'A Survey of Secondary Schools in India'.

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[1] Different States in India have different patterns, e.g. in U.P., high school finishes at grade X while in Delhi, it terminates at the end of grade XI.

(v) The Survey Questionnaire had been sent at least a year earlier, if not more, this task therefore would not be additional burden on the same set of schools. Also, the questionnaire was addressed to the headmasters, while the tests were to be taken by the children and administered by the class teachers. Thus, the two groups of individuals being involved in actual work were different from each other.

In the sample mentioned above, complete lists of high/higher secondary schools were obtained as available in 1961 or 1962 with the Directorates of Education of these States. Further information was obtained on whether a school was run by Government or private agencies, was located in urban or rural area, admitted boys or girls.[1] From each of these cells a ten percent random sample of schools was selected. An exception was made for rural girls schools, where, considering the very small number of schools, it was decided to raise the proportion to fifty percent. To illustrate the procedure mentioned above, one of the tabular set of information as available from the files on the sample from which we worked is reproduced below:

State-Bihar

Category of School	Type of School	Boys		Girls		Total
		Urban	Rural	Urban	Rural	
High School	Govt.	16 2	14 1	2 -	- -	32 3
	Non Govt	162 16	1090 109	43 4	8 4	1303 133
Hr. Sec. School	Govt.	3 -	12 1	9 1	- -	24 2
	Non Govt	98 10	87 9	10 1	1 1	196 21
	Total	279 28	1203 120	64 6	9 5	1555 159

The list of these schools were obtained. Estimating the number of children who were likely to be available, it was felt that the number of children was much larger than could be accommodated in the time and money available on this project. It was not necessary either. To cut down the work, 25% of this selected sample was dropped by striking off every 4th school from the lists of schools as available from 'A Survey of Secondary Schools.'

This, however, gives the 'model on which the work was started. The drop out from this sample began right with the first letter addressed to the schools. National Institute of Education, and for that matter even the Ministry of Education at New Delhi has no direct control over the schools, or State Directorates of Education. Any directive or request sent out from here is treated according to the judgement and the goodwill of the Director of Education as well as the head of the school concerned. Care was taken to keep the drop out to minimum, in that a personal letter was addressed by the Joint Director of the National Council of Educational Research and Training to the Directors of Education of all the five States to issue instructions to heads of 'selected' schools to help the N.I.E. in administration of tests. Many schools cooperated more than willingly, some had genuine difficulties, Some declined frankly others carried out the work in name and did not follow the instructions faithfully. The worst illustration of the last point is the administration of tests meant for the final year class of the school (i.e. grade XI) to students

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1 Most schools at this stage are single sex schools. There are a negligible number, if any of co-educational high schools in Delhi, U.P. and Bihar. There are a few in Madhya Pradesh and Rajasthan. There were categorised with boys or girls' schools according to the predominance of children of one sex or the other.

of lower grade to avoid 'wasting of time' of students who have to take a public examination. The data actually used for norms are from a small number of schools, the geographic spread of these schools is shown in the maps.

Data from the State of Bihar were worst hit. Ever since the test material was despatched to Bihar i.e. late in October and early November, 1966, the educational institutions remained closed for one ~~[illegible]~~ reason or the other. There were riots in the State, students' protests, preelection disturbances and worst of all, a state of acute draught. The data were received only from five to ten schools. The rest all expressed their inability to complete the work due to perpetual closures of the institutions. Finally, the schools were advised to keep the test materials and administer it to students of new IX (for test for grade VIII) in 1967 and do nothing about the tests for grade XI. That is why no norms are given for grade XI for the State of Bihar. Even for data for grade VIII, the rejection rate was very high. The answers looked like dictated ones in many schools, the scripts were thus rejected.

Sample in the State of Uttar Pradesh also suffered because lots of test material got locked up for Bihar. The original plan of using the non-consumable tests more than once, failed and material could not be sent to all the schools. Detailed information about number of schools selected, number where material was sent and the number of schools from which material has been used in sample for norms is set out in the following table.

Table - 7
Number of schools in the Final Sample

State	Number of Schools				
	Delhi	U.P.	Bihar	Raj.	M.P.
Sample adopted	35	144	120	51	72
Where tests were sent for administration.	28	82	95	41	54
Data from which has been used for norms	27	30	34	30	30

Some of the reasons for which data were rejected are mentioned below:

1. Unattempted X Form. Some schools, specially girls' schools returned test material after getting Y Form only attempted with the plea that the children find X form too difficult to answer.
2. Small variance in the scores. Although the variances for all school were not calculated separately but scores were assessed roughly, if the children tended to record more or less the same score, such data were considered unreliable.
3. Individual cases where one form was not attempted.
4. The data which were received too late according to our work schedule. If after, waiting for sometime, processing of data of a State had started, the data received later than that date were put aside - not even scored.

The scoring at this stage was done by hand. Wherever the sample size looked large e.g., in grade VIII, Madhya Pradesh, the number was lessened by selecting fifty percent of the scripts. No school was completely eliminated in the process. The statistics given are on shrunken samples - wherever they were shrunken.

At this time it was not known whether the forms would prove to be parallel in another sample; it was, therefore, decided to administer both the forms. Ideally speaking, one could have checked the equivalence of forms before rushing in for data for forms but to avoid delay in work this step was shelved. As an alternative both the forms could have been administered in each of the schools to get comparable data but as each form had two parts to be administered separately, this procedure was considered too risky in the hands of schools.

It was decided to send form A to all odd numbered schools and form B to all even numbered schools as available on typed lists. Equivalence of forms is discussed later in the report.

Administration of the Final Forms

It was arranged to have a circular request sent by the Director of Education of the State concerned to all the selected schools.[1] This circular was followed by a request for cooperation - detailing briefly the project and the nature of the task required of students and teachers from the Principal Investigator. A small postcard to be filled in and returned was attached herewith, wherein information about number of children, correct address of the school, convenient mode of receiving the material (rail or post) and the willingness or otherwise of the school to cooperate in the project was obtained. On receipt of this information, some copies of manual of instructions for administration of tests - both in Hindi and in English and copies of practice booklets along with answer sheets were sent with a request that the same may be studied by the class teachers concerned and doubts, if any, may be referred to us. The test material followed this. Material was packed in two bundles - practice booklets and tests separately as the two had to be opened on two different days. The headmasters were requested to send the material back to us immediately after use. Along with this some relevant information was also obtained (e.g., the number of children who took the test, the code number that was dictated to the children etc.) on a cyclostyled form.

For further details on actual administration of the tests, manual of instructions may be seen.

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1. In Uttar Pradesh, six schools were reported to be wrongly addressed by us - which were not pursued later.

Norms

For each State frequency distribution of scores were obtained for each stratum separately as well for the total sample. The same are given in Table nos 8 to 16 in Appendix.2 The norms were to be calculated on the total sample in each State which in case of absence of non response/rejection would have been representative samples of the States. With such large scale changes in obtained from stipulated sample, the adequacy of proportions was in doubt. In view of differences in means (which quite frequently looked highly significant), simple addition of frequencies over the strata looked unreliable. A solution was found in proportionate weightage (pi) to data in each of the strata. Estimate of (pi) was made from information available from 'Second Educational Survey' and 'A Survey of Secondary Schools in India'. After estimating pi value for each stratum, transformation constants Tci were calculated for each stratum i as

$$Tci = \frac{piN}{ni}$$ where N = Total number of cases in all the strata
ni = number of cases in i th stratum

Transformed frequency distribution of each strata was then obtained by $Tfij = Tci \times fij$ where Tfij is transformed frequency of jth class interval in ith stratum and fij is the obtained frequency of jth class interval in ith stratum. Transformed frequency of the total distribution for jth class interval was obtained by

$$Tij = \sum_{i=1}^{k} Tfij$$ where k = number of stratum

Tij values were rounded up to the nearest integers. In cases where sum of the rounded frequencies did not add up to exact N, suitable corrections were made in large frequencies to make the N comparable with that of the original distribution.

Where data on a stratum was not available, it was ignored and p_i's were proportionately increased to make $\Sigma p_i = 1.00$.[1] Only in one case (Madhya Pradesh Form B) a small number of cases (sixteen only) in one of the stratum were dropped as it was felt that data from such a small number was getting more weightage in the total transformed distribution than could be relied upon.

Transformed distributions for various States are given in Tables 6 and 7 in appendix II. Graphical representations of these distributions are also given in the appendix. For each State distribution of Form A and B are given on the same graph for easy comparisons. Being on the same scale, these can also be scanned for comparability over the States.

Comparability of Scores

Obtained frequency distributions for various strata in each of the States are given in appendix. Means and standard deviations are set out in tables 8 and 9 Remarks on differences are not based on any statistical analysis but only on such differences as are obvious.

It is not out of place to draw the attention of the reader to the fact that persistent State differences were noticed at the item analysis stage.[2] In most subtests Delhi children made largest mean scores and children from Bihar, in contrast, the smallest. Rajasthan, Uttar Pradesh and Madhya Pradesh tended to fall in between with Rajasthan coming very close to Delhi occasionally. This observation is particularly true for tests for grade VIII. For grade XI the picture was slightly different, State of Bihar maintained its lowest position but Delhi children showed different pattern for different tests. For tests on verbal ability, they no longer scored highest (in fact the means were lower than the mean scores of children from Uttar Pradesh, Rajasthan and Madhya Pradesh, where Hindi is probably used more) but on tests dealing with numbers, Delhi children were still far ahead of children from other States. Tests on reasoning had somewhat mixed trends depending, perhaps on the admixture of reasoning and verbal factors. This fact is important from the point of view that all data for item-analysis were obtained under personal supervision of the staff of the Department of Psychological Foundations and many interfering variables were under control. No schools could have helped children in locating and writing correct answers, or hurried them through the tests or encouraged them to somehow get through these and begin their serious (?) studies. In the final administration, tests have been administered by school teachers under supervision of their own headmasters. The data seemed to indicate that some, even if few, schools have not quite grasped the purpose or the importance of dependable data from their schools. Some seemed to be really concerned about the possible poor performance of their students and in their anxiety, seemed to have dictated correct answers. Occasionally, the scores from a school seemed more of a measure of the teacher's aptitude rather than the children's. Although such bits of data were largely eliminated but some errors - specially the ones which were not easily detectable on simple scrutiny of the scores - could still have remained. This may be borne in mind while studying the differences.

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[1] Usually, the missing stratum, is the rural girls' schools which are very small in number. Even when 50% of these schools as against 10% of other strata were included, the total no. of girls' schools selected for each of the States were as follows:
Delhi 4; U.P. 6: Bihar 4: Rajasthan 2: M.P. 6.

[2] See Tables 1 and 2 (a to i) appendix.I

In table 8 from the column headed by M under "Weighted Total" one can notice that Delhi has maintained its superiority over other States, Rajasthan, Uttar Pradesh and Madhya Pradesh also tend to maintain their (Contd--- on page 62)

Table 8 (a)

Means and Standard Deviationsfor each stratum

Grade VIII-Form V

Stratum		1			2			3		
States		M	SD	N	M	SD	N	M	SD	N
Delhi	A	68.77	20.66	648	50.21	18.61	244	75.15	21.56	257
	B	67.76	23.11	345	68.60	17.35	174	81.06	23.49	304
Uttar Pradesh	A	68.57	24.78	261	60.87	22.67	441	67.64	24.58	239
	B	59.59	24.62	218	59.99	20.32	294	99.64	17.89	58
Bihar	A	70.39	24.33	364	62.66	22.09	492	-	-	-
	B	66.42	20.30	131	63.39	23.28	346	56.17	21.24	60
Rajasthan	A	71.76	21.89	366	61.11	19.62	330	68.95	23.19	197
	B	75.00	20.32	339	70.86	18.95	269	78.06	23.79	113
Madhya Pradesh	A	64.25	23.49	715	58.48	20.32	235	57.73	21.89	278
	B	64.39	24.21	811	63.00	20.81	200	53.00	29.15	16

1. For urban boys
2. For rural boys
3. For urban girls
4. For rural girls

This classification is maintained wherever strata are coded by number.

Contd...

Table 8 (a) - Contd...

Means and Standard Deviations for each stratum

Grade VIII-Form V

States	Stratum	4			Total			Weighted Total		
		M	SD	N	M	SD	N	M	SD	N
Delhi	A	71.75	16.79	48	65.89	22.11	1197	69.08	20.41	1197
	B	77.80	17.69	148	73.61	20.65	971	72.82	21.83	971
Uttar Pradesh	A	60.09	19.42	118	64.22	23.66	1059	64.07	24.12	1059
	B	-	-	-	63.87	24.92	570	65.40	25.96	570
Bihar	A	80.60	20.62	51	66.07	23.64	907	64.84	23.04	907
	B	-	-	-	63.34	22.43	537	63.92	22.63	537
Rajasthan	A	-	-	-	67.21	21.91	893	65.90	21.47	893
	B	85.21	20.54	70	74.93	20.86	791	72.76	20.20	791
Madhya Pradesh	A	46.13	13.78	63	60.91	22.32	1291	60.41	22.31	1291
	B	-	-	-	64.04	23.92	1027	63.47	22.41	1011

This classification is maintained wherever strata are coded by numbers.

Table 3 (b)

Means and Standard Deviations for each stratum

Grade VIII-Form N

State	Stratum	1			2			3		
		M	SD	N	M	SD	N	M	SD	N
Delhi	A	26.36	8.12	648	19.45	8.06	244	23.59	8.75	257
	B	21.00	9.39	345	22.34	7.54	174	22.37	8.95	304
Uttar Pradesh	A	18.58	8.35	261	17.33	9.25	441	15.05	7.73	239
	B	19.47	7.49	218	15.74	8.07	294	23.78	6.52	58
Bihar	A	19.80	9.35	364	22.20	8.97	492	-	-	-
	B	20.64	7.02	131	20.29	10.21	346	7.83	5.35	60
Rajasthan	A	21.43	9.31	366	18.60	7.92	330	20.08	7.11	197
	B	28.87	9.37	339	21.99	9.63	269	18.50	6.30	113
Madhya Pradesh	A	17.17	9.52	715	14.70	7.96	235	16.04	7.18	273
	B	12.23	10.42	811	19.64	8.02	200	15.00	11.56	16

Contd.....

Table 8 (b) Contd...

Means and Standard Deviations for each stratum

Grade VIII - Form N

States	Stratum	4			Total			Weighted Total		
		M	SD	N	M	SD	N	M	SD	N
Delhi	A	17.25	8.53	48	23.99	8.86	1197	24.02	9.78	1197
	B	22.34	7.3[illegible]	148	21.86	8.76	971	21.66	9.13	971
Uttar Pradesh	A	16.70	7.79	118	17.08	8.63	1059	17.47	9.66	1059
	B	-	-	-	18.43	8.91	570	19.05	9.12	570
Bihar	A	23.38	8.21	51	21.17	9.08	907	21.72	9.03	907
	B	-	-	-	18.99	9.89	537	20.18	8.78	537
Rajasthan	A	-	-	-	20.40	8.47	893	19.97	8.66	893
	B	24.16	8.82	70	22.40	9.22	791	22.32	9.35	791
Madhya Pradesh	A	7.01	3.30	63	15.89	8.86	1291	15.72	8.60	1291
	B	-	-	-	18.42	10.08	1027	19.26	9.27	1011

Table 8 (c)

Means and Standard Deviations for each stratum

Grade VIII

Entire Battery - (V + N)

State	Stratum	1			2			3		
		M	SD	N	M	SD	N	M	SD	N
Delhi	A	95.21	25.30	648	69.52	24.17	244	98.50	27.51	257
	B	89.33	29.00	345	90.96	21.45	174	103.23	29.02	304
Uttar Pradesh	A	87.22	30.12	261	73.29	29.43	441	82.78	29.97	239
	B	79.08	30.20	213	74.79	25.85	294	127.05	20.02	58
Bihar	A	83.46	31.32	364	84.93	27.37	492	-	-	-
	B	86.19	25.06	131	83.42	30.35	346	64.00	21.59	60
Rajasthan	A	92.77	23.23	366	79.89	24.43	330	89.61	27.87	197
	B	93.60	26.15	339	92.93	25.71	269	97.09	27.96	113
Madhya Pradesh	A	80.61	29.46	715	73.34	26.55	235	73.27	24.66	273
	B	82.76	31.35	811	83.05	25.69	200	72.37	36.00	16

Contd...

Table 3 (c) - Contd..

Means and Standard Deviations for each stratum

Grade VIII

Entire Battery - (V + N)

State	Stratum	4			Total			Weighted Total.		
		M	SD	N	M	SD	N	M	SD	N
Delhi	A	88.00	23.77	43	89.89	27.34	1197	93.39	25.94	1197
	B	100.30	20.30	148	95.14	27.41	971	94.38	26.91	971
Utter Pradesh	A	76.52	25.03	118	81.31	29.53	1059	81.40	29.93	1059
	B	-	-	-	81.35	31.30	570	84.05	32.78	570
Bihar	A	104.13	23.22	51	87.21	29.12	907	89.47	26.83	907
	B	-	-	-	82.06	29.21	537	83.97	29.48	537
Rajasthan	A	-	-	-	87.32	27.24	393	85.67	26.93	393
	B	107.93	26.57	70	97.23	26.61	791	95.03	26.25	791
Madhya Pradesh	A	53.23	14.63	63	76.92	29.27	1291	76.62	26.87	1291
	B	-	-	-	82.55	30.45	1027	82.36	28.40	1011

Table 9 (a)

Means and Standard Deviations for each stratum

Grade XI

Form - V

States	Stratum	1 M	1 SD	1 N	2 M	2 SD	2 N	3 M	3 SD	3 N
Delhi	A	57.74	19.49	331	44.73	18.68	69	65.89	17.03	93
	B	57.88	22.02	181	53.15	15.30	63	75.76	21.72	195
Uttar Pradesh	A	70.53	16.23	175	54.53	13.41	619	43.62	15.97	101
	B	65.00	19.39	201	53.76	13.33	460	73.61	20.00	45
Rajasthan	A	69.75	19.90	221	69.23	18.06	126	56.20	22.25	57
	B	72.10	13.33	153	76.03	17.92	94	68.53	20.20	145
Madhya Pradesh	A	66.05	21.79	547	57.04	13.84	345	73.12	21.39	42
	B	65.34	22.65	672	59.03	21.33	227	57.39	22.25	67

Contd...

Table 9 (a) - Contd---

Means and Standard Deviations for each stratum

Grade XI

Form - V

State	Stratum	4			Total			Weighted Total		
		M	SD	N	M	SD	N	M	SD	N
Delhi	A	-	-	-	57.06	18.25	493	58.46	18.38	493
	B	-	-	-	65.70	16.52	444	64.05	22.05	444
Uttar Pradesh.	A	-	-	-	56.47	19.37	395	61.25	20.71	395
	B	-	-	-	59.96	20.35	706	60.90	20.42	706
Rajasthan	A	-	-	-	67.68	20.23	404	67.23	20.45	404
	B	36.77	18.95	55	73.58	19.75	447	72.13	20.72	447
Madhya Pradesh	A	60.12	17.75	13	63.10	21.24	947	63.09	21.33	947
	B	59.47	17.64	58	64.40	22.33	1024	61.53	22.36	1024

Table 9 (b)

Means and Standard Deviations for each stratum

Grade XI

Form - N[illegible]

Stratum / States		1			2			3		
		M	SD	N	M	SD	N	M	SD	N
Delhi	A	31.92	12.79	331	28.88	9.36	69	30.89	9.33	93
	B	32.44	14.07	181	32.61	10.83	68	33.17	12.03	195
Uttar Pradesh	A	34.32	12.31	175	27.53	12.88	619	11.06	5.38	101
	B	32.03	12.33	201	24.66	11.33	460	21.70	9.33	45
Rajasthan	A	29.79	15.05	221	23.87	10.55	126	15.90	8.37	57
	B	31.62	13.60	153	29.65	12.44	94	25.45	13.01	145
Madhya Pradesh	A	28.31	13.21	547	23.37	11.85	345	27.45	11.87	42
	B	27.90	12.35	672	27.64	11.43	227	20.47	11.62	67

Contd..

Table 9 (b) - Conted----

Means and Standard Deviation for each stratum

Grade XI

Form - N

Stratum States		14			Total			Weighted Total		
Delhi	A	-	-	-	31.03	11.94	493	30.66	12.83	493
	B	-	-	-	32.78	12.19	444	32.78	12.17	444
Uttar Pradesh	A	-	-	-	26.89	13.75	895	29.39	13.68	[illegible]
	B	-	-	-	25.19	9.49	706	27.93	12.37	706
Rajasthan	A	-	-	-	25.99	13.86	404	26.67	14.29	404
	B	33.21	15.06	55	29.52	13.72	447	30.36	13.50	447
Madhya Pradesh	A	24.34	7.46	13	25.98	12.01	947	25.79	12.59	947
	B	20.51	6.94	58	26.62	12.11	1024	26.50	12.10	1024

Table 9 (c)

Means and Standard Deviations for each Stratum

Grade XI

Form - (V + N)

Stratum States		1			2			3		
		M	SD	N	M	SD	N	M	SD	N
Delhi	A	89.52	27.87	331	72.17	20.54	69	94.10	23.54	93
	B	89.86	29.73	181	91.09	29.9[illegible]	68	109.05	27.28	195
Uttar Pradesh	A	104.70	27.03	175	82.11	27.91	619	54.61	19.16	101
	B	96.79	29.78	201	78.41	24.72	460	99.94	25.39	45
Rajasthan	A	98.80	30.89	221	93.52	24.27	126	72.34	28.55	57
	B	103.21	27.29	153	105.61	25.48	94	93.22	30.03	345
Madhya Pradesh.	A	93.80	31.10	547	79.15	26.10	345	98.59	27.89	42
	B.	92.64	30.76	672	86.21	27.59	227	78.19	30.66	67

Contd...

Table 9 (c) ---Contd..

Means and Standard Deviations for each Stratum

Grade XI

Form - (V + N)

Stratum States		4			Total			Weighted Total		
		M	SD	N	M	SD	N	M	SD	N
Delhi	A	-	-	-	87.97	28.45	493	89.21	25.03	493
	B	-	-	-	98.47	34.71	444	97.08	24.07	444
Uttar Pradesh	A	-	-	-	83.42	30.12	895	90.68	30.76	895
	B	-	-	-	85.44	29.31	706	88.57	29.12	706
Rajasthan	A	-	-	-	92.22	29.99	404	93.56	30,53	404
	B	119.86	31.28	55	102.52	29.66	447	102.16	27.93	447
Madhya Pradesh.	A	85.50	6.47	13	88.85	30.22	947	88.71	30.01	947
	B	79.81	21.47	58	89.54	30.00	1024	87.68	30.19	1024

position around the same place only Bihar records comparatively higher mean scores. The reader may be reminded that the administration of the tests in Bihar was least satisfactory. It could not be carried out before the examinations. The tests were administered on fresh entrants to grade IX. This, thus is a selected group-selected to the extent of failure and drop out at the grade VIII level, figures for which are not known to us. But this is not the entire story. The rate of rejection of data is also highest for Bihar; data from more than 40% of the schools (from which scores were considered for inclusion in sample for Norms) had to be rejected.

The differences are, also somewhat smaller than noticed in data for item analysis. In either form i.e. A or B the maximum difference at grade VIII is approximately 9 points for V and N and 17 and 13 points respectively for forms A and B when total score is considered.

In grade XI, the differences tend to narrow down. The results are once again, consistent with those obtained in sample for item analysis. Delhi children give up their highest position on verbal tests, which is taken by Rajasthan, however, Delhi maintains its superiority on numerical tests. In comparison to the differences on numerical tests at the tryout stage, the difference are now smaller. The differences for girls are bigger than those for boys. On the total form, Rajasthan leads and this is consistent with previous data.

Over strata, at grade VIII level, except on test in problems in arithmetic, urban girls, in Delhi scored higher in all tests at the tryout stage; they have maintained a similar superiority. Similar persistence of slight superiority of urban boys over urban girls is noticeable for samples from Rajasthan. In Madhya Pradesh urban boys score somewhat higher then girls - this tendency was only dimly visible in item analysis ~~is~~ data. In Uttar Pradesh the trend of any such differences was not clear at item analysis stage. In the sample for norms, ignoring the small sample (N = 58) of urban girls, urban boys do somewhat better than girls. Although distinctly clear in this administration, this trend could not be considered as in contradiction with the one in item analysis data. Only in Bihar, there is a reversal of trend from rural boys scoring high in comparison to urban boys, at the item analysis stage to the opposite side. Urban girls maintain their closeness to urban boys. This reversal may be due to accidental sampling at the item analysis stage.

In general, then, urban children tend to score somewhat higher than rural children and except in Delhi, boys higher than girls. Urban girls scoring higher than boys is a persistent phenomenon in Delhi.[1] Boys scoring higher than girls fits in more easily with expected behaviour in society. It seems that in Delhi the expectations from the two groups which enter schools remain the same while girls' group, on the average may be somewhat more selected than the boys' groups. Greater diligence, docility and freedom from temptations of world outside may result in higher achievement in the restricted area of academic tasks for schools girls.

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[1] Such is this writer's experience with data on some intelligence tests.

Trends at grade XI level at item analysis stage can be briefly summarised as follows. In Delhi, Urban girls maintained their superiority over urban boys in all but in test on mathematical reasoning; Urban, rural differences were not always available (due to small samples from rural areas) and wherever available the trends were not very persistent. In all other States, urban boys in general scored higher than urban girls with very few exceptions. On the whole, urban children recorded higher mean scores than the rural children but the differences were small.

If small samples are ignored, picture remains the same for final administration. Delhi girls score as high as boys on tests involving numbers as well. Girls' means on N form are much lower then those of boys in Uttar Pradesh and Rajasthan but only slightly lower in Madhya Pradesh.

On Comparability of Forms A and B

Scrutiny of means entered under column "Weighted

Totals" in tables 8 and 9 leaves one with the impression that the forms may not be parallel. Reader's attention is drawn to the fact that the forms A and B were administered to two different samples of schools i.e., each form to half the schools from the total list of the selected ones. There is, however, no reason for the schools to be systematically different from each other. Therefore, persistent differences need serious attention.

For tests at grade VIII, four out of five sets of means for form V, have larger values for form B, three of these being significantly so. Reverse direction is recorded only in data from Bihar. For form N, differences in all the five pairs are significant, only two of these have higher means for form A and three for form B. As a consequence, in the total score although in four out of five States M_B is higher than M_A, only two of these differences are significant. One difference is significant for the reverse direction. Inspite of a mixed picture there is a serious possibility of form B at grade VIII being easier than form A. Variances are also somewhat larger for form B.

For tests at grade XI, for the varbal form, two out of four means are higher for form B the other two for form A. But where $M_B > M_A$ the differences are significant, the other two are not. For form N, three out of four differences are significant and two of these are in favour of form B. For the total score, two pairs of mean record significant differences both higher for form B. Variances, although at times unequal, do not show any consistency in the trend. It is a somewhat perplexing situation. Items were divided into two forms randomly and the distribution of difficulty values was not considered different from each other. The same is reproduced below for scrutiny by the reader.

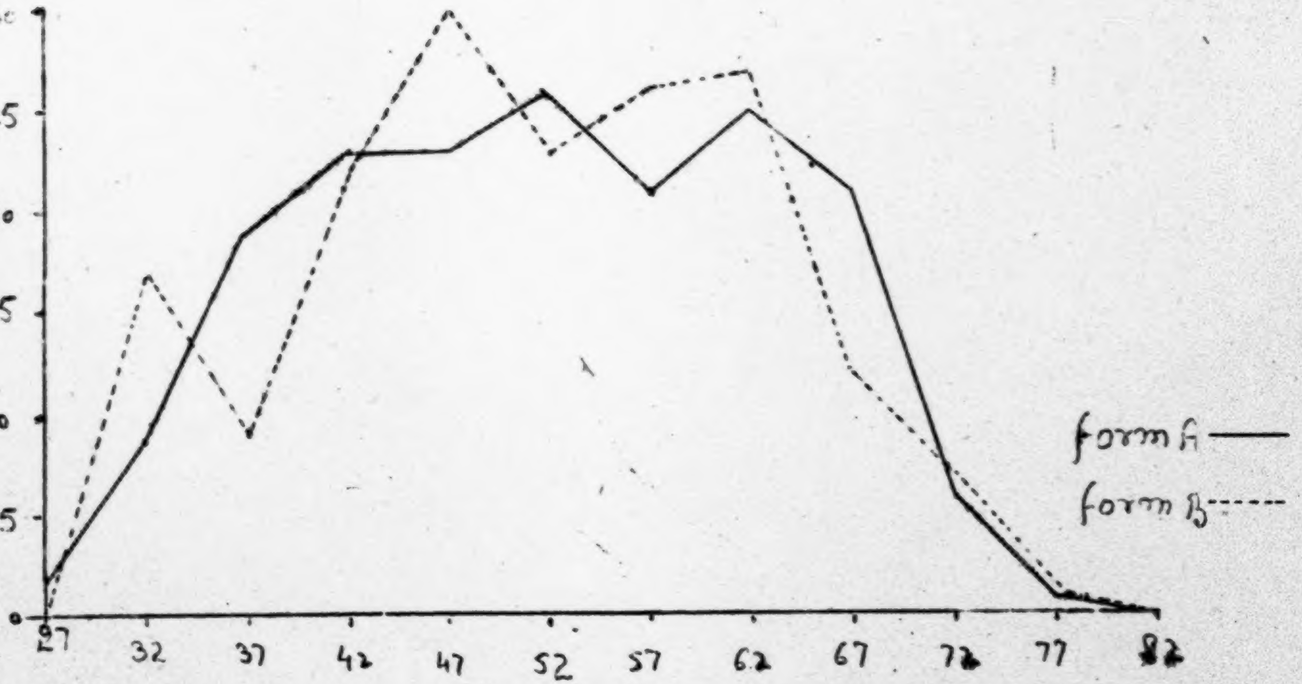
Table - 10

Distribution of Difficulty values of Items selected for final forms.

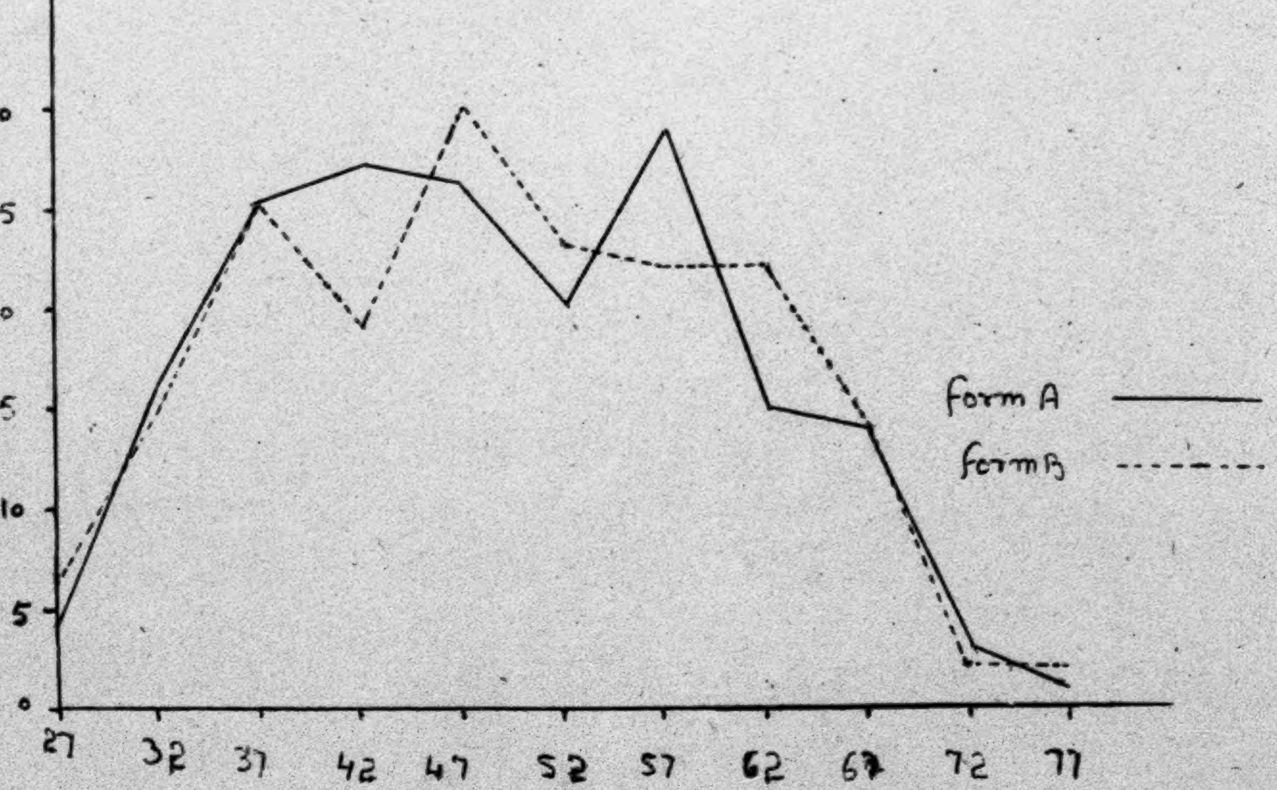
Pass Percentages.	No. of Items Grade VIII		Grade - XI	
	A	B	A	B
25 - 29	4	6	2	1
30 - 34	16	15	9	17
35 - 39	25	25	19	9
40 - 44	27	19	23	22
45 - 49	26	30	23	30
50 - 54	20	23	26	23
55 - 59	29	22	21	26
60 - 64	15	22	25	27
65 - 69	14	14	21	12
70 - 74	3	2	6	7
75 - 79	1	2	1	1
80 - 84	-	-	-	1
Total :	180	180	176	176
Average :	48.64	49.00	51.38	51.47

Graphs of two sets of distributions though not idential are over lapping in the entire range.

Distribution of Item Difficulties in Paralled Forms.



Distribution of Item Difficulties in Pralled forms..



S. B. Gupta.

The investigator has found it difficult, with this data in hand to answer the question on equivalance of the forms either positively or negatively. Small studies will have to be conducted in all the five States to check parallelism of the two forms. Since the indices used in dividing the items were overall averages, the chances of forms being different for different States remain. At present only a study conducted in Delhi is being reported. Both the forms were given to children of grades VIII and XI of three Schools in Delhi. In each grade, alternate children were given form A or B. The procedure of administration of the tests as laid out in the manual of instruction was followed. Table 11 (a & b) gives the data available from this study.

Table - 11 (a)

Data on Equivalence of Forms A & B.
-grade VIII

Name of the subtest.	$\overline{XA}$	$\overline{XB}$	s^2_A	s^2_B	SE A-B	$\overline{X}_A - \overline{X}_B$	Significance
Synonyms	16.80	15.76	33.03	37.77	.65	1.04	
Classification	8.20	9.01	17.17	12.86	.42	.93	Sig. at .05
Analogy	9.95	9.35	23.50	20.05	.50	.30	
Reading Comprehension.	7.31	7.81	9.99	18.46	.41	.50	
Antonyms	7.78	8.55	18.22	24.86	.53	.77	
Similarities	6.51	6.88	9.00	11.06	.34	.37	
Sentance Completion.	9.37	9.59	24.80	35.69	.60	.22	
Total V Form	65.92	66.94	331.06	619.10	2.40	1.02	
Arithmetic	9.46	10.31	13.10	21.39	.45	.85	
Number Series	8.04	7.80	40.82	44.98	.72	.24	
Total N Form	17.44	18.10	115.36	91.90	1.11	.66	
V + N	83.38	85.05	752.89	1009.32	3.25	1.67	

$N_A = 169$, $N_B = 162$

Table 11(b)

Data on Equivalence of Forms A & B - Grade XI.

Name of the subtest.	$\overline{X}_A$	$\overline{X}_B$	s^2_A	s^2_B	SE_{A-B}	δ	Significance
Synonyms	11.85	12.77	19.65	19.54	.57	.92	
Analogy	9.76	9.71	13.30	12.32	.46	.05	
Reading Comprehension	12.04	11.85	18.58	18.87	.56	.19	
Antonyms	13.78	12.98	10.16	20.58	.50	.80	
Sentence Completion.	11.60	11.85	14.42	14.39	.49	.25	
Classification	8.12	9.15	19.43	8.78	.50	1.03	Sig. at.05
Total V Form	67.34	68. 32	341.27	313.97	2.35	.98	
Mathematical Reasoning	11.36	11.98	24.40	16.96	.59	.62	
Number Series	10.62	10.65	41.35	40.73	.84	.03	
Data Sufficiency	8.67	8.40	10.68	13.87	.46	.27	
Total N Form	30.65	31.03	150.71	145.95	1.57	.35	
V + N	98.00	99.35	711.34	599.70	3.33	1.35	

$N_A = 129$, $N_B = 110$

Although none of the differences i.e. for forms V, N or total are significant, in all cases means are somewhat higher for form B. This is also consistent with last row of Table-10.

Under the circumstances separate norms have been given for the forms.

Reliability:

From the randomly selected samples of 200 cases from each State, reliability coefficients (by KR-20) were obtained for each subtest seprately. The range of these values is listed below:-

Table - 12.

Range of Reliability Coefficients over the States.

S.No.	Grade - VIII			Grade - XI		
S.No.	Name of the Variable		Range of Values.	S.N. Name of the Variable		Range of Values.
1.	Synonyms	A	.80 to .87	1. Synonyms	A	.76 to .83
		B	.80 to .89		B	.76 to .85
2.	Classification	A	.66 to .75	2. Analogy	A	.71 to .78
		B	.59 to .73		B	.71 to .75
3.	Analogy	A	.77 to .85	3. Reading Comprehension	A	.74 to .81
		B	.73 to .80		B	.75 to .81
4.	Reading Comprehension.	A	.52 to .67	4. Antonyms	A	.79 to .85
		B	.66 to .76		B	.76 to .85
5.	Antonyms.	A	.76 to .83	5. Sentence Completion.	A	.76 to .80
		B	.72 to .84		B	.72 to .85
6.	Similarities	A	.59 to .71	6. Classification.	A	.83 to .86
		B	.60 to .79		B	.83 to .87
7.	Sentence Completion.	A	.82 to .86	7. Mathematical Reasoning.	A	.84 to .90
		B	.82 to .87		B	.81 to .88
8.	Arithmetic	A	.72 to .83	8. Number Series	A	.91 to .94
		B	.74 to .83		B	.92 to .94
9.	Number Series	A	.90 to .92	9. Data Sufficiency.	A	.74 to .79
		B	.92 to .93		B	.79 to .84

These reliability coefficients were used to estimate battery reliability by Mosier's formula[1],

$$r_{ss} = 1 - \frac{\Sigma w_j^2 \sigma_j^2 - \Sigma w_j^2 \sigma_j^2 r_{jj}}{\Sigma w_j^2 \sigma_j^2 + 2 \Sigma w_j w_k \sigma_j \sigma_k r_{jk}}$$

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[1] Mosier, C.I. on the reliability of a weighted composite Psychometrika, 1943, VIII, 161-168.

Table 13

Battery Reliability for Forms V,N and Total

State	Grade VIII						Grade XI					
	A			B			A			B		
	V	N	V+N	V	N	V+N	V	N	V+N	V	N	V+N
Delhi	.94	.90	.95	.95	.93	.96	.93	.96	.95	.93	.95	.96
Uttar Pradesh	.96	.92	.97	.96	.92	.97	.94	.97	.97	.94	.96	.96
Rajasthan	.93	.90	.95	.93	.91	.94	.93	.98	.97	.92	.97	.96
Madhya Pradesh	.95	.90	.96	.95	.93	.97	.92	.94	.95	.94	.96	.96

In some States some schools were persuaded to administer both the forms from which parallel form reliablity could be estimated. Since the demand on time made in here was very heavy.

The School administrator in general was reluctant to help. Since the tests were administered on consecutive days, children also felt tired or bored. The data as available are given below :-

Table - 14

Reliability Coefficients from Parallel Forms

States from which obtained.	Grade - VIII				Grade XI			
	No.	V	N	V+N	No.	V	N	V+N
Madhya Pradesh.	338	.31	.86	.36	246	.36	.80	.91
Rajasthan	106	.31	.41	.81				
Delhi					103	.73	.75	.80
Combined from Delhi Madhya Pradesh and Rajasthan,	581	.80	.73	.83	393	.34	.30	.89

These Coefficients are smaller then the ones set out in table 17(a&b) appendix II. Fresh investigations need to be made about parallel-form reliability where motivation of the students of the students and teachers could be assured.

Appendix I

Table 1 (a)

Distribution of Scores of Samples for Item-Analysis
Grade VIII - Synonyms

Scores	Delhi					Rajasthan				Madhya Pradesh				
	UB	RB	UG	RG	Total	UB	RB RG	UG	Total	UB	RB	UG	RG	Total
0-4							1	1	1					
5-9							1	0	1					
10-14	1	6			7		2	1	3	3	3	1	2	9
15-19	0	8		4	12		3	4	7	10	8	4	1	23
20-24	3	12	1	11	27	5	7	4	16	19	6	9	6	30
25-29	5	20	1	12	38	8	18	5	31	17	15	13	10	55
30-34	7	18	3	23	51	11	25	19	55	26	23	15	5	69
35-39	18	22	6	27	73	29	29	19	77	26	32	20	15	93
40-44	18	26	11	29	84	20	51	21	92	26	35	32	16	109
45-49	21	34	26	36	117	28	34	25	87	34	28	31	29	122
50-54	32	34	35	34	135	36	17	32	85	27	25	29	27	108
55-59	38	28	26	26	118	35	15	33	83	16	12	24	21	73
60-64	37	25	35	19	116	37	13	16	66	21	19	33	17	90
65-69	28	17	30	19	94	20	11	18	49	27	13	28	10	78
70-74	16	32	45	3	96	18	13	11	42	15	17	13	7	52
75-79	33	5	31	4	73	10	6	5	21	21	7	11	2	41
80-84	13	5	23	3	44	9	3	2	14	11	5	4	1	21
85-89	5	3	13	1	22	4	2	3	9	6	3	4		13
90-94			15	2	17			3	3		1	5		6
95-99														
Total	275	295	301	253	1124	270	250	222	742	295	252	276	169	992
Mean:	57.25	49.67	65.31	47.32	54.78	53.93	45.74	50.74	50.59	50.49	49.10	51.87	48.86	49.89

Table 1(a) contd.

	Uttar Pradesh				Bihar				
Scores	UB	RB	UG	Total	UB	RB	UG	RG	Total
0-4					1				1
5-9					2	3			5
10-14	1	1	1	3	12	2	2	6	22
15-19	2	9	1	12	25	5	12	8	50
20-24	6	13	11	30	25	9	15	10	59
25-29	13	12	20	45	20	14	19	6	59
30-34	14	24	22	60	17	14	23	13	67
35-39	22	28	29	79	20	19	24	11	74
40-44	38	20	34	92	27	20	36	13	96
45-49	29	37	27	93	26	19	24	12	81
50-54	25	24	25	74	13	19	23	15	70
55-59	30	20	14	64	16	18	21	10	65
60-64	25	31	20	76	12	13	14	13	52
65-69	24	16	10	50	8	6	15	14	43
70-74	20	18	17	55	11	7	7	2	27
75-79	11	22	16	49	4	3	7	1	15
80-84	5	11	14	30	6	3	3	1	13
85-89	11	8	5	24	4	4	1		9
90-94	3		3	6	1				1
95-99	3			3					
Totals	282	294	269	845	250	178	246	135	809
Means	54.04	51.80	50.59	51.92	40.46	45.74	44.42	43.85	43.58

Table No.1(b)

Distribution of Scores of Samples for Item-Analysis
Grade VIII - Antonyms

Scores	Delhi					Rajasthan				Madhya Pradesh				
	UB	RB	UG	RG	TOTAL	UB	RB RG	UG	Total	UB	RB	UG	RG	Total
0-4											1			1
5-9							2		2					
10-14	2	1	1	4	8	1	3	1	5	6	6	2	1	15
15-19	2	7	0	4	13	6	7	4	17	6	11	13	4	34
20-24	6	19	1	24	50	12	13	4	29	21	18	11	5	55
25-29	13	19	16	29	77	21	25	18	59	22	32	31	14	99
30-34	24	37	9	48	118	27	47	30	104	39	49	38	13	139
35-39	50	51	31	41	173	39	44	34	117	41	41	43	18	143
40-44	39	48	35	28	150	45	23	46	114	31	28	41	15	115
45-49	37	24	58	37	156	40	23	39	102	38	15	47	11	111
50-54	51	31	44	23	149	37	21	21	79	33	31	17	6	87
55-59	42	40	48	10	140	20	7	13	40	21	13	18	2	54
60-64	11	15	28	5	59	11	5	7	23	17	5	14		36
65-69	4	2	25	1	32	3	1	5	9	10	1	4		15
70-74										1				1
Totals	281	294	296	254	1125	262	221	217	700	287	250	281	89	907
Means	44.6	41.6	49.1	37.6	[illegible]	41.87	36.95	41.38	40.36	41.09	33.86	34.58	36.21	39.98

Table 1(b) contd.

	U.P.				Bihar				
Scores	UB	RB	UG	Total	UB	RB	UG	RG	Total
0-4									
5-9		2	1	3		1	1	2	4
10-14	1	8	3	12	15	9	6	10	40
15-19	2	10	9	21	26	5	22	16	69
20-24	16	17	13	46	15	17	21	10	63
25-29	19	26	22	67	28	27	23	19	97
30-34	31	45	36	112	31	39	30	22	122
35-39	37	39	38	114	22	33	34	22	111
40-44	42	38	55	133	28	23	27	16	94
45-49	36	24	41	101	12	8	13	13	46
50-54	31	17	29	77	16	9	18	7	50
55-59	14	19	18	51	4	7	6	7	24
60-64	13	7	9	29	4	0	5		9
65-69	12	1	3	16	1	1	1		3
70-74	1			1					
Totals	255	251	277	783	202	179	207	144	732
Means	42.43	37.44	40.30	40.01	32.8	33.8	34.6	32.7	33.52

Table No.1(c)

Distribution of Scores of Samples for ItemaAnalysis
Grade VIII - Stentence Completion

Scores	Delhi					Rajasthan				Madhya Pradesh				
	UB	RB	UG	RG	Total	UB	RB RG	UG	Total	UB	RB	UG	RG	Total
0-4														
5-9	1	4		3	8						1	1		2
10-14	9	10	1	8	28	3	1	3	7	12	6	9	1	27
15-19	14	17	1	11	43	7	16	14	37	20	17	11	18	66
20-24	24	34	5	36	99	19	12	30	61	21	23	37	21	102
25-29	31	31	19	35	116	21	29	55	105	41	49	53	32	175
30-34	40	78	33	44	195	35	34	44	113	35	56	51	36	178
35-39	64	51	55	52	222	60	43	33	136	36	38	46	31	151
40-44	61	28	56	38	183	55	36	35	126	33	32	27	21	113
45-49	19	23	52	14	108	34	23	23	80	22	17	13	6	58
50-54	9	15	40	4	68	22	16	11	49	19	14	12	4	49
55-59	4	11	24	5	44	8	6		14	7	1	14		22
60-64	2		10	10	12	2	2		4					
65-69			1	1	2									
Totals	278	302	297	251	1128	266	218	248	732	246	253	274	170	943
Means	34.68	33.34	42.67	32.82	35.97	38.02	36.24	32.95	35.77	33.79	32.15	33.02	31.29	32.36

Table 1(c) contd.

Scores	Uttar Pradesh UB	RB RG	UG	Total	Bihar UB	RB	UG	RG	Total
0-4						1	1	1	3
5-9	4	4		8	9	5	9	1	24
10-14	4	9	14	35	46	16	24	15	101
15-19	33	27	22	82	32	29	56	19	136
20-24	41	43	28	112	25	23	40	19	107
25-29	30	48	42	120	33	24	25	16	93
30-34	62	46	64	172	36	30	27	27	120
35-39	34	50	39	123	26	18	28	9	81
40-44	27	30	26	23	25	12	17	14	68
45-49	21	15	12	48	12	14	13	11	50
50-54	12	12	12	36	9	5	5	7	26
55-59	6	9	8	23	1		0		1
60-64	4		2	6			1		1
65-69			1	1					
Totals	286	293	270	849	254	177	246	139	816
Means	31.58	32.39	31.83	31.94	25.01	27.86	26.04	28.98	27.22

Table No.1(d)

Distribution of Scores of Samples for Item-Analysis
Grade VIII - Reading Comprehension

Scores	Delhi UB	Delhi RB	Delhi UG	Delhi RG	Delhi TOTAL	Rajasthan UB	Rajasthan RB RG	Rajasthan UG	Rajasthan TOTAL	Madhya Pradesh UB	Madhya Pradesh RB	Madhya Pradesh UG	Madhya Pradesh RG	Madhya Pradesh TOTAL
5-9		2			2					1				1
10-14	2	4		2	8		7	1	8	9	15	9	3	36
15-19	6	35	4	28	73	9	28	11	48	28	46	28	18	120
20-24	38	42	15	30	125	40	42	19	101	48	65	49	41	213
25-29	53	50	49	62	214	40	59	48	147	55	59	69	60	243
30-34	65	58	50	53	226	67	56	58	181	43	25	38	28	134
35-39	43	67	64	51	225	52	52	35	119	35	21	43	9	108
40-44	45	31	56	14	147	36	16	28	80	29	12	18	6	65
45-49	13	7	32	8	60	16	7	12	35	16	5	8	1	30
50-54	6		22	4	32	5	1	4	10	8	2	7	2	19
55-59	1		8	1	10	4		3	7	5	1	6		12
60-64			4		4									
65-69			1		1									
Totals	272	296	305	254	1127	269	248	219	736	287	251	275	168	981
Means	32.85	30.06	37.56	30.27	32.81	33.21	28.65	32.80	31.55	30.29	25.75	29.71	26.76	28.36

Table No. 1(d) contd.

Scores	Uttar Pradesh UB	Uttar Pradesh RB RG	Uttar Pradesh UG	Uttar Pradesh Total	Bihar UB	Bihar RB	Bihar UG	Bihar RG	Bihar Total
5-9	3	5		8	6	4	5	3	18
10-14	6	27	8	41	27	18	34	6	85
15-19	33	51	16	100	65	23	56	16	160
20-24	60	56	51	167	49	31	48	31	159
25-29	58	46	39	143	36	34	39	39	148
30-34	58	36	66	162	25	31	22	25	103
35-39	34	15	31	80	15	21	26	12	74
40-44	16	28	31	70	16	6	9	5	36
45-49	5	22	16	43	7	4	4	0	15
50-54	5	2	3	10	1	2	3	1	7
55-59	3	1	1	5	0		1		1
60-64			1	1	1				1
65-69			1	1	1				1
Totals	281	286	264	831	248	174	247	138	807
Means	28.44	26.69	31.05	28.67	24.00	2[illegible].14	24.09	26.13	24.90

Table No. 1 (e)

Distribution of Scores of Samples for Item-ANALYSIS

Grade VIII - Arithmetic

Scores	Delhi					Rajasthan				Mrdhya Pradesh				
	UB	RB	UG	RG	TOTAL	UB	RB RG	UG	TOTAL	UB	RB	UG	RG	Total
0-4	2			4	6		1		1			3	1	4
5-9	2	2		9	13	1	7	3	11	2	3	7	4	16
10-14	1	4	2	9	16	6	22	28	56	7	6	39	12	64
15-19	10	15	17	28	70	39	72	62	173	44	28	71	21	164
20-24	20	30	45	57	152	58	52	48	158	61	42	71	30	204
25-29	30	50	57	36	173	78	46	34	158	50	47	50	34	181
30-34	35	35	64	50	184	49	25	22	96	35	41	17	31	124
35-39	36	42	64	40	182	23	13	16	52	20	36	10	19	85
40-44	33	46	39	10	128	8	5	5	18	25	15	0	12	52
45-49	55	39	10	7	111	4	5	2	11	20	20	5	3	48
50-54	28	16	3	1	48	1			1	7	7	2	1	17
55-59	21	8			29				10	10	4			14
60-64														
65-69														
Totals	273	287	301	251	1121	267	248	220	735	281	249	275	168	973
Means	38.56	35.03	31.63	28.94	33.14	26.66	22.79	22.25	24.12	29.62	30.39	21.13	26.79	26.93

Table No. 1(e) contd.

	Uttar Pradesh				Bihar				
Scores	UB	RB RG	UG	Total	UB	RB	UG	RG	Total
0-4		-	1	1			3	6	9
5-9	2	4	3	9	10	5	24	9	48
10-14	19	17	36	72	30	11	65	35	141
15-19	37	39	87	163	44	17	78	35	174
20-24	72	64	69	205	39	13	41	34	127
25-29	72	48	54	174	44	27	21	15	107
30-34	45	19	12	76	36	39	3	0	78
35-39	22	17	1	40	17	29	3	4	53
40-44	9	15	2	28	6	15			21
45-49	2	10		12	8	20			28
50-54		18		18	1				1
55-59		15		15					
60-64		15		15					
65-69		1		1					
Totals	280	282	265	827	235	176	238		787
Means	25.45	30.94	20.43	25.71	24.19	30.48	16.62		22.10

Table No. 1(f)

Distribution of Scores of Samples for Item-Analysis

Grade VIII - Analogy

	Delhi					Rajasthan				Madhya Pradesh				
Scores	UB	RB	UG	RG	TOTAL	UB	RB RG	UG	TOTAL	UB	RB	UG	RG	Total
0-5														
0-4						1			1					
5-9		5			5	3	4		7	8				8
10-14	1	17		2	20	5	13	8	26	26	5	17	7	55
15-19	11	28	4	19	62	8	23	9	40	21	21	27	13	82
20-24	18	26	14	32	90	18	34	19	71	33	24	34	34	125
25-29	24	44	19	37	124	22	40	28	90	34	41	49	20	144
30-34	44	44	47	53	188	30	48	43	121	28	48	51	30	157
35-39	66	40	40	38	184	45	36	36	117	40	43	44	29	156
40-44	51	38	44	32	165	54	23	35	112	32	23	21	20	96
45-49	26	37	49	21	133	46	18	30	94	23	29	9	13	74
50-54	19	16	41	9	85	25	3	5	33	22	14	18	6	60
55-59	5	6	25	7	43	6	6	3	15	15	2	10	2	29
60-64	3		7	3	12	3		2	4	5	2		1	8
65-69			2		2									
Totals	268	301	292	253	1113	265	248	218	731	287	252	280	168	9[illegible]
Means	37.00	32.80	41.61	33.63	36.31	37.77	30.57	34.71	34,41	32.68	33.63	31.45	32.21	32.49

Table 1 (f) contd.

Scores	Uttar Pradesh UB	Uttar Pradesh RB RG	Uttar Pradesh UG	Uttar Pradesh Total	Bihar UB	Bihar RB	Bihar UG	Bihar RG	Bihar Total
0-4			2	2	1		2		3
5-9	1	2	3	6	2	2	10	2	16
10-14	13	11	9	33	21	14	30	21	86
15-19	26	24	33	83	31	18	47	19	115
20-24	40	39	53	132	27	30	50	15	122
25-29	38	48	42	128	29	48	23	20	120
30-34	45	49	38	132	38	24	24	21	107
35-39	50	38	27	115	42	11	16	14	83
40-44	26	33	27	86	24	8	27	15	74
45-49	25	25	16	66	21	8	11	10	50
50-54	10	13	15	38	10	9	3	2	24
55-59	9	9	6	24	4	5	2		11
60-64	3		3	6	1				1
65-69			1						
Totals	286	291	275	852	251	177	245	139	812
Means	32.47	32.41	30.80	31.91	30.86	28.78	25.45	27.72	28.23

Table No. 1(g)

Distribution of Scores of Samples for Item-Analysis

Grade VIII - Number Series

Scores	Delhi					Rajasthan				Madhya Pradesh				
	UB	RB	UG	RG	TOTAL	UB	RB RG	UG	TOTAL	UB	RB	UG	RG	Total
0-4	16	8	6	13	43	8	19	13	40	2[illegible]	15	50	19	109
5-9	19	21	11	26	77	21	28	22	71	21	23	47	26	117
10-14	16	29	13	29	87	32	22	20	74	20	29	34	26	109
15-19	13	34	18	32	97	32	35	13	30	28	21	28	23	100
20-24	29	33	21	29	112	26	30	13	69	22	18	27	20	87
25-29	34	26	31	31	122	21	22	15	58	27	24	25	14	90
30-34	23	20	32	20	95	21	16	17	54	27	26	18	12	83
35-39	22	24	29	22	97	17	15	20	52	26	29	18	8	81
40-44	25	28	26	16	95	20	12	20	52	19	22	14	8	63
45-49	21	21	21	13	76	16	14	11	41	22	14	7	7	50
50-54	25	28	27	11	91	14	4	18	36	13	16	8	5	42
55-59	13	18	16	10	58	9	6	8	23	12	9	2	1	24
60-64	20	6	25	2	52	4	2	6	12	7	4	2		13
65-69	7		17		24	2		1	3	8	0	1		9
70-74			4		4					3	1			4
Totals	283	296	297	254	1130	243	225	197	665	280	250	281	169	981
Means	33.47	30.60	38.11	25.90	32.23	27.73	23.33	29.45	26.77	29.39	2[illegible].27	19.43	20.47	24.76

Table No. 1 (g) contd.

Scores	Uttar Pradesh UB	Uttar Pradesh RB RG	Uttar Pradesh UG	Uttar Pradesh Total	Bihar UB	Bihar RB RG	Bihar UG	Bihar Total
0-4	24	19	22	65	22	20	23	65
5-9	37	42	33	112	21	32	40	93
10-14	33	45	36	114	27	25	28	80
15-19	35	30	43	108	22	26	32	80
20-24	31	23	32	86	21	32	18	71
25-29	19	24	34	77	11	41	14	66
30-34	28	17	13	58	27	30	18	75
35-39	11	11	17	39	19	20	9	48
40-44	14	9	10	33	18	20	6	44
45-49	10	13	16	39	10	14	8	32
50-54	15	12	4	31	9	5	2	16
55-59	10	14	3	27	8	9	3	20
60-64	4	16	2	22	4	7		11
65-69	4	10	1	15	2	4		6
70-74								
Totals	275	285	266	826	221	285	201	707
Means	24.44	26.18	21.96	24.17	26.00	26.28	18.87	24.09

Table No. 1 (h)

Distribution of Scores of Samples for Item-Analysis

Grade VIII - Classification

	Delhi					Rajasthan				Madhya Pradesh				
Scores	UB	RB	UG	RG	TOTAL	UB	RB RG	UG	TOTAL	UB	RB	UG	RG	Total
0-4														
5-9	1	1		6	8	1	2		3	2		2	1	5
10-14	7	5	2	9	23	7	9	3	19	9	9	16	6	40
15-19	27	20	8	14	69	11	22	8	41	32	20	14	8	74
20-24	40	46	16	38	140	34	56	25	115	35	35	38	30	138
25-29	53	75	52	63	243	50	56	50	156	54	63	68	51	236
30-34	84	88	61	67	300	69	53	55	177	68	67	59	47	241
35-39	38	43	68	40	189	57	33	43	133	45	31	49	19	144
40-44	20	14	48	9	91	25	15	28	68	28	16	21	7	72
45-49	5	10	22	4	41	10	1	4	15	13	3	8		24
50-54		1	16		17	1		2	3	[illegible]	[illegible]	[illegible]		10
55-59			4		4							1		1
60-64														
Totals	275	303	297	250	1125	265	247	218	730	287	251	278	169	985
Means	29.02	29.58	35.33	26.46	30.76	31.19	27.69	31.61	30.13	29.87	29.45	29.79	28.12	29.44

Table 1 (h) contd.

Scores	Uttar Pradesh UB	Uttar Pradesh RB RG	Uttar Pradesh UG	Uttar Pradesh Total	Bihar UB	Bihar RB	Bihar UG	Bihar RG	Bihar Total
0-4							1		1
5-9	1	6	2	9	7	2	9		18
10-14	21	21	10	52	24	28	15	6	73
15-19	27	37	23	87	34	29	36	17	116
20-24	43	47	39	129	42	28	50	23	143
25-29	51	55	65	171	55	35	56	31	177
30-34	60	57	65	182	44	29	41	30	144
35-39	48	49	38	135	33	20	27	17	97
40-44	23	18	24	65	14	5	5	14	38
45-49	4	1	5	10		0	5	0	5
50-54	7		2	9		1		1	2
55-59									
60-64									
Totals	285	291	273	849	253	177	240	139	814
Means	28.96	27.09	29.20	28.40	25.85	24.49	25.41	28.29	25.40

Table No. 1(i)

Distribution of Scores of Samples for Item-Analysis

Grade VIII - Similarities

	Delhi					Rajasthan				Madhya Pradesh				
Scores	UB	RB	UG	RG	TOTAL	UB	RB RG	UG	TOTAL	UB	RB	UG	RG	Total
-														
0-4												1		1
5-9							1		1	2		1		3
10-14		1		3	4		1		1	2	2	4	1	9
15-19	8	11	2	15	36	2	11	1	11	14	8	13	16	11
20-24	15	12	10	34	71	8	28	4	40	19	14	30	15	78
25-29	36	29	22	36	123	25	28	12	65	46	53	29	29	157
30-34	57	58	44	42	201	37	44	16	97	33	52	56	39	180
35-39	51	70	52	57	230	59	55	36	150	55	46	46	40	187
40-44	42	53	64	33	192	51	47	34	132	35	32	46	22	135
45-49	41	35	50	19	145	32	27	33	92	52	25	27	7	111
50-54	16	19	30	8	73	12	7	16	35	25	11	15	5	56
55-59	3	3	22	4	32	4	1	3	8	11	3	13	1	28
60-64	3		11		14					2		1		
65-69			1		1									
Tota 1s	272	291	308	251	1122	230	250	155	635	290	251	285	170	996
Means	36.87	36.85	41.50	33.41	37.36	38.04	34.74	40.32	37.30	37.55	34.31	35.37	33.20	35.33

Table No. 1(i) contd.

	Uttar Pradesh				Bihar				
Scores	UB	RB RG	UG	Total	UB	RB	UG	RG	Total
0-4							2		2
5-9		1		1	3	10	2	3	18
10-14	5	9	4	18	21	4	13	5	43
15-19	22	21	15	58	22	24	23	16	85
20-24	33	29	27	89	40	33	38	16	127
25-29	49	48	37	134	36	40	44	29	149
30-34	59	53	62	174	30	23	64	23	140
35-39	49	55	58	162	36	13	34	22	105
40-44	41	32	30	103	38	13	23	20	94
45-49	18	30	22	70	11	17	6	7	41
50-54	5	17	7	29	12	3	7	2	24
55-59	2	7	5	14	4		2	1	7
60-64	4		3	7					
65-69									
Totals	287	302	270	859	253	180	258	144	835
Means	32.66	33.69	33.91	33.42	30.66	27.78	29.54	30.33	29.69

Table 2 (a)

Distribution of Scores of Samples for Item-Analysis

Grade XI - Synonyms

	Delhi			Rajasthan			M.P.			U.P.			Bihar		
Scores	UB RB	UG RG	TOTAL	UB RB	UG RG	TOTAL	UB RB	UG RG	TOTAL	UB RB	UG RB	TOTAL	UB RB	UG RG	Total
0-4															
5-9													1		1
10-14	1	1	2					2	2				1		1
15-19	7	0	7	1	5	6	4	1	5		2	2	10	7	17
20-24	18	5	23	1	4	5	11	3	14		5	5	17	12	29
25-29	32	8	40	3	11	14	17	10	27	8	10	18	23	20	43
30-34	35	7	42	7	19	26	28	21	49	12	10	22	25	16	41
35-39	41	20	61	20	27	47	35	31	66	16	20	36	29	21	50
40-44	60	26	86	28	51	79	43	36	79	25	29	54	26	18	44
45-49	39	30	69	38	42	80	37	36	73	28	33	61	25	31	56
50-54	31	37	68	45	37	82	28	49	77	29	42	71	29	26	55
55-59	39	46	85	48	41	89	23	35	58	33	23	56	20	19	39
60-64	14	41	55	31	48	79	21	27	48	26	25	51	25	19	44
65-69	9	43	52	34	19	53	19	25	44	28	18	46	6	10	16
70-74	6	35	41	17	7	24	14	25	39	19	16	35	3	14	17
75-79	6	14	20	12	8	20	7	12	19	15	13	28	6	7	13
80-84		8	8	8	1	9	12	4	16	8	8	16	8	1	9
85-89		3	3	0	1	1	5	5	10	5	2	7	15	1	16
90-94				1		1	1		1		1	1			
95-99															
Totals	338	324	662	294	321	615	305	322	627	252	257	509	269	222	491
Means	43.08	56.41	49.60	55.01	49.92	52.35	49.61	52.20	50.94	55.61	92.94	56.26	46.69	46.84	46.76

Table - 2(b)

Distribution of Scores of Samples for Item-Analysis

Grade XI - Antonyms

	Delhi					Rajasthan			M.P.			U.P.			Bihar		
	UB	RB	UG	RG	TOTAL	UB RB	UG RG	TOTAL	UB RB	UG UG	TOTAL	UB RG	UG	TOTAL	UB RB	UG RG	TOTAL
0-4	1			1	2												
5-9	0			0	0											2	2
10-14	2		1	0	3							1		1		4	11
15-19	7	4	1	1	13		3	3	3	7	10	0	1	1	27	11	38
20-24	15	3	2	1	21	1	2	3	8	3	11	2	5	7	23	10	33
25-29	12	10	2	9	33	3	2	5	23	15	38	9	10	19	32	22	54
30-34	21	17	3	5	46	12	14	26	26	23	49	14	11	25	28	20	48
35-39	17	22	10	12	61	8	27	35	28	26	54	20	19	39	33	26	59
40-44	27	20	16	18	81	21	28	49	28	32	60	36	21	57	34	42	76
45-49	37	19	22	17	95	26	35	61	28	31	59	35	37	72	27	28	55
50-54	31	20	33	18	102	50	36	86	28	43	71	33	40	73	34	24	58
55-59	22	11	42	14	89	50	28	78	43	34	77	24	35	59	28	28	56
60-64	15	5	51	10	81	29	26	55	36	31	67	25	24	49	13	6	19
65-69	4		17		21	31	24	55	26	21	47	28	26	54	17	7	24
70-74						32	8	40	32	16	48	9	12	21	14	5	19
75-79						3	4	7	11	6	17	8	9	17	3	1	4
80-84									2		2	1		1	5		5
Totals	211	131	200	106	648	266	237	503	322	288	610	245	250	495	325	236	561
Means	42.83	41.77	53.55	45.25	46.94	55.67	50.49	53.22	50.93	49.40	50.08	54.42	51.50	52.93	42.04	41.42	42.10

Table - 2(c)

Distribution of Scores of Samples for Item-Analysis

Grade XI - S. Completion

	Delhi					Rajasthan			TOTAL	M.P.			
Scores	UB	RB	UG	RG	Total	UB	RB RG	UG		UB	RB	UG	Total
5-9													
10-14	8				8		1		1	1	1	2	4
15-19	9	1		2	12	5	0	2	7	10	14	8	32
20-24	14	5	1	1	21	4	0	8	12	11	23	9	43
25-29	11	16	0	2	29	11	8	7	26	26	40	24	90
30-34	30	22	7	17	76	20	18	13	51	20	30	35	85
35-39	25	23	17	13	78	21	23	23	67	38	43	39	120
40-44	32	23	16	18	89	37	32	25	94	38	39	41	118
45-49	35	17	31	15	98	50	44	35	129	43	33	21	97
50-54	22	9	38	17	86	51	36	24	111	34	18	34	86
55-59	11	9	44	13	77	42	23	22	87	33	23	24	80
60-64	2	1	30	6	39	18	8	7	33	14	4	15	33
65-69	1		6		7	6	4		10	7	2	4	13
70-74			1		1						1		1
Totals	200	126	191	104	621	265	197	166	628	275	271	256	802
Means	39.15	39.06	51.42	44.16	43.52	46.62	45.78	42.96	45.61	42.82	37.92	41.45	40.73

Table - 2(c) contd

Scores	U.P.				Bihar		
	UB	RB	UG	Total	UB RB	UG RG	Total
5-9					4	4	8
10-14	2	1	1	4	25	14	39
15-19	5	5	4	14	45	24	69
20-24	8	14	6	28	41	33	74
25-29	22	17	17	56	47	38	85
30-34	33	23	23	79	52	21	73
35-39	36	38	24	98	38	34	72
40-44	41	38	48	125	45	26	71
45-49	39	39	41	119	26	23	49
50-54	29	22	44	95	16	12	28
55-59	30	8	27	65	10	14	24
60-64	22	10	23	55	11	5	16
65-69	8	5	4	17	1	2	3
70-74			2	2			
Totals	275	220	262	757	361	250	611
Means	43.42	40.86	45.11	43.26	32.12	32.78	32.61

Table 2 (d)

Distribution of Scores of Samples for Item-Analysis

Grade XI - Reading Comprehension

	Delhi			Rajasthan			M.P.			U.P.			
Scores	UB RB	UG RG	TOTAL	UB RB	UG RG	TOTAL	UB RB	UG RG	TOTAL	UB RB	UG	Total	Bihar Total
10-14							2		2				
15-19							2	3	5	2		2	12
20-24	2	1	3	-	1	1	18	5	23	2	1	3	24
25-29	8	3	11	2	3	5	36	11	47	6	2	8	22
30-34	23	7	30	5	5	10	25	20	45	21	9	30	48
35-39	30	9	39	10	6	16	36	23	59	23	22	45	36
40-44	36	24	60	14	23	39	34	36	70	26	25	51	30
45-49	51	38	89	32	25	57	20	31	51	34	38	72	18
50-54	37	27	64	31	32	63	25	31	56	37	25	62	20
55-59	41	28	69	48	32	80	20	35	55	47	41	88	8
60-64	35	34	69	35	39	74	9	13	22	14	34	48	9
65-69	18	31	49	20	15	35	12	14	26	22	22	44	9
70-74	14	28	42	23	14	37	8	9	17	13	15	28	2
75-79	7	26	33	9	8	17	6	5	11	3	19	22	11
80-84	2	21	23	7	4	11	3	2	5	5	8	13	5
85-89		2	2	1		1	1		1	2	2	4	
Totals	304	279	583	237	207	446	257	238	495	257	263	520	254
Means	50.54	59.33	54.74	57.15	55.45	56.38	43.11	43.18	43.14	50.97	55.54	53.28	40.78

Table - 2 (e)

Distribution of Scores of Samples for Item-Analysis

Grade XI - Mathematical Reasoning

	Delhi			Rajasthan			M.P.			U.P.			Bihar Total
Scores	UB RB	UG RG	Total	UB RB	UG RG	Total	UB RB	UG RG	Total	UB RB	UG	Total	
5-9							1	0	1		8	8	I
10-14		2	2	2	4	6	7	11	18	1	28	29	35
15-19	1	4	5	2	24	26	26	34	60	2	43	45	55
20-24	2	15	17	10	38	48	51	68	119	9	55	64	66
25-29	8	29	37	20	63	83	70	80	150	29	47	76	48
30-34	14	28	42	32	44	76	50	59	109	53	27	80	32
35-39	21	33	54	31	42	73	38	19	57	62	12	74	25
40-44	29	28	57	61	30	91	23	12	35	57	10	67	12
45-49	41	32	73	46	27	73	19	8	27	37	8	45	14
50-54	41	30	71	34	11	45	8	6	14	17	10	27	11
55-59	29	17	46	14	6	20	13	5	18	9	2	11	9
60-64	23	14	37	14	3	17	9	1	10	9	1	10	6
65-69	34	9	43	12	3	15	12	0	12	2	1	3	11
70-74	29	6	35	9	1	10	8	1	9	4	1	5	8
75-79	12	8	20	5	1	6	7	1	8	8		8	5
80-84	13	6	19	1		1	2		2	6		6	9
85-89	8	4	12				4		4	4		4	
90-94	2	1	3										
Totals	307	266	573	293	297	590	348	305	653	309	253	562	347
Means	55.68	45.05	50.75	40.76	33.45	39.07	30.79	28.49	29.72	41.85	25.85	34.65	32.08

Table - 2 (f)

Distribution of Score of Samples for Item-Analysis

Grade XI - Analogy

Scores	Delhi					Rajasthan				M.P.				U.P.				Bihar			
	UB	RB	UG	RB	TOTAL	UB	RB RG	UG	TOTAL	UB	RB	UG	TOTAL	UB	RB	RG	TOTAL	UB	RB RG	UG	TOTAL
0-4										2			2								
5-9										1			1						1	2	3
10-14	2				2	1			1	2	7	5	14	5	4		9	8	14	6	28
15-19	5	3		1	9	4	7		11	11	22	9	42	10	15	11	36	32	28	25	85
20-24	17	18	8	7	50	13	21	10	44	28	62	41	131	31	38	34	103	58	32	29	118
25-29	22	18	14	23	77	22	22	17	61	40	48	59	147	53	41	60	154	46	43	29	118
30-34	40	25	20	21	106	36	38	24	98	42	45	43	130	41	29	51	121	25	14	24	63
35-39	54	19	30	23	126	42	33	17	92	41	33	26	100	50	41	42	133	30	5	14	49
40-44	42	23	40	15	120	63	36	14	113	36	26	34	96	36	38	20	94	22	6	5	33
45-49	26	15	36	9	86	51	21	13	85	31	10	24	65	22	12	28	62	12	13	12	37
50-54	13	8	24	6	51	25	9	12	46	28	11	4	43	18	4	11	33	6	12	4	22
55-59	3	2	43	3	51	11	4	5	20	15	3	3	21	9		9	18	3	1	3	7
60-64			9		9	2	3		5	3		2	5	2		1	3	1			1
65-69			2		2																
70-74																					
Totals	224	131	226	118	689	270	194	112	576	260	267	250	797	277	222	267	766	243	169	153	565
Means	36.55	35.40	45.03	35.66	38.81	39.85	36.05	37.36	38.09	36.59	30.28	31.42	33.17	34.74	31.80	33.87	33.58	39.22	37.77	38.57	38.61

Table - 2 (g)

Distribution of Score of Samples for Item-Analysis

Grade - XI Number Series

Scores	Delhi				TOTAL	Rajasthan			TOTAL	M.P.			TOTAL	U.P.			TOTAL	Bihar			TOTAL
	UB	RB	UG	RG		UB	RB RG	UG		UB	RB	UG		UB	RB	UG		UB	RB RG	UG	
0-4	3	2		4	9	8	12	22	42	8	17	36	61	13	15	36	64	57	41	34	132
5-9	5	5	3	5	18	7	17	19	43	10	19	39	68	17	15	21	53	25	28	23	76
10-14	3	4	2	7	16	6	12	23	41	13	27	34	74	30	18	29	77	29	16	16	61
15-19	12	2	6	13	33	9	24	23	56	15	22	20	57	29	21	25	75	20	13	26	59
20-24	11	6	11	13	41	17	30	22	69	19	15	25	59	39	19	28	84	26	7	21	54
25-29	17	9	8	14	48	22	21	29	72	15	14	22	51	32	33	33	98	19	14	8	41
30-34	13	16	17	7	53	37	22	28	87	16	18	12	46	20	40	28	88	16	11	10	37
35-39	27	14	15	11	67	39	25	31	95	19	19	16	54	20	26	23	69	16	5	4	25
40-44	23	21	31	9	84	42	12	16	70	16	18	14	48	22	25	21	68	7	5	5	17
45-49	23	18	23	12	76	38	6	17	61	19	15	13	47	19	12	17	46	17	3	4	24
50-54	30	23	38	8	99	15	11	8	34	28	9	10	47	17	3	5	25	14	7	1	22
55-59	27	12	32	1	72	18	7	8	33	18	5	9	32	11		2	13	10	10	2	22
60-64	22	1	10	3	36	9	3	4	16	9		2	11	8		0	8	3	11	1	15
65-69	1		3		4	1		1	2	1		1	2	2		1	3		3		3
Totals	217	133	199	107	656	268	202	251	721	206	198	253	657	277	227	269	773	259	174	155	588
Means	41.35	41.07	43.76	30.32	39.82	36.81	27.20	27.54	31.89	34.99	25.59	22.28	27.54	26.56	23.52	26.39	26.56	22.16	23.57	17.97	20.93

Table 2 (h)

Distribution of Scores of Samples for Item-Analysis

Grade XI - Data Sufficiency

Scores	Delhi. UB	Delhi. RB	Delhi. UG	Delhi. RG	TOTAL	Rajasthan UB UG	Rajasthan RB RG	TOTAL	M.P. UB	M.P. RB	M.P. UG	TOTAL	U.P. UB	U.P. RB	U.P. UG	U.P. Total	Bihar Total UB UG RG
0-4	2			1	3	1		1	2	1		3	3	1		4	8
5-9	7	5	1	5	18	6	7	13	13	17	7	37	8	16	12	36	59
10-14	20	24	8	27	79	23	34	57	31	67	39	137	42	52	50	144	102
15-19	35	24	23	28	110	40	55	95	48	80	52	180	68	52	40	160	C6
20-24	22	23	32	28	105	27	45	72	47	35	44	126	30	35	14	79	27
25-29	10	16	44	0	70	29	16	45	24	31	14	69	26	26	14	66	1c
30-34	7	12	32	7	58	12	12	24	26	19	14	59	12	26	10	48	6
35-39	6	21	15		42	14	5	19	23	7	2	32	12	6	7	25	2
40-44	5	7	12		24	7	0	7	25	2	3	30	5	2	2	9	1
45-49	2	5	15		22	4	4	8	22	1	0	23	6	1	3	12	
50-54	3		7		10	1		1	8	2	1	11	5		1	6	
55-59	1		6		7				2	1		3	5			5	
Totals:	120	137	195	105	557	164	178	342	271	263	176	710	224	217	153	594	286
Means	21.71	24.52	30.38	18.29	24.71	23.25	20.47	21.80	26.80	19.21	19.59	22.20	23.51	19.72	18.99	20.58	14.27

Table - 2 (i)

Distribution of Scores of Samples for Item-Analysis

Grade - XI Concept Formation

Scores	Delhi				TOTAL	Rajasthan			TOTAL	M.P.			TOTAL	U.P.			TOTAL	Bihar			
	UB	RB	UG	RG		UB	RB RG	UG		UB	RB	UG		UB	RB	UG		UB	RB RG	UG	Total
0-4	6	5	5	2	18	3	6	6	15	8	8	8	24	5	9	8	22	21	6	18	45
5-9	19	7	9	5	40	10	10	17	37	16	13	15	44	23	22	11	56	56	33	35	124
10-14	23	16	24	9	72	17	19	20	56	25	22	26	73	30	19	44	93	49	39	33	121
15-19	33	27	38	23	121	38	29	37	104	31	42	39	112	35	48	48	131	54	44	24	122
20-24	29	24	29	32	114	48	31	56	135	33	55	50	138	52	42	39	133	38	17	23	78
25-29	41	32	34	17	124	64	34	39	137	47	54	54	155	47	46	36	129	17	11	6	34
30-34	19	17	31	10	77	39	29	39	107	45	40	35	120	39	23	33	95	14	7	4	25
35-39	16	2	35	3	56	29	17	27	73	36	28	30	94	18	11	25	54	2	3	1	6
40-44	10	1	21	1	33	8	7	13	28	37	6	14	57	11	2	14	27	0	2	1	3
45-49			6		6	2		1	3	5		1	6	3	0	3	6	1	1		2
Totals	196	131	232	102	661	258	182	255	695	283	268	272	823	263	222	261	746	252	163	145	560
Means	23.18	21.08	25.92	16.41	23.14	25.00	23.06	24.11	24.23	26.54	23.59	23.93	24.72	23.03	20.76	22.90	22.31	15.02	15.68	13.58	14.93

Table - 3(a)

Pass Percentages[1] and Discrimination Indices[2] of Selected Items.
(Item Analysis stage)
grade VIII - Form A.

S.No.[3]	Delhi %	Delhi D.I.	U.P. %	U.P. D.I.	Bihar %	Bihar D.I.	Raj. %	Raj. D.I.	M.P. %	M.P. D.I.	Average %	Average D.I.
1.	61	36	72	38	62	37	71	25	72	43	67	37
2.	80	60	68	51	55	68	72	37	64	62	65	56
3.	78	43	73	48	56	55	58	42	59	42	65	45
4.	79	52	60	44	59	70	51	33	68	53	64	54
5.	65	40	55	56	57	49	73	27	68	42	63	42
6.	62	40	66	47	54	60	66	29	63	42	62	45
7.	67	52	59	60	44	46	63	40	76	53	62	50
8.	73	39	69	70	56	79	58	56	50	66	61	66
9.	79	42	53	28	42	42	74	33	61	38	60	38
10.	59	51	63	42	63	40	61	40	56	34	59	42
11,	56	52	72	48	52	62	63	36	56	58	59	52
12.	73	47	60	60	45	64	64	61	65	70	57	63
13.	72	42	58	48	53	68	45	26	50	51	56	50
14.	69	28	52	30	51	41	49	27	59	36	56	31
15.	49	43	56	57	52	76	66	50	52	47	54	50
16.	59	29	49	39	58	51	54	27	52	39	52	35
17.	59	46	43	53	40	59	63	54	50	56	51	53
18.	58	45	45	36	52	46	48	23	47	47	50	42
19.	68	28	50	44	36	45	54	73	49	56	49	46
20.	53	59	49	41	40	54	43	46	55	54	48	52
21	58	46	53	34	32	40	38	28	50	39	46	38

1. Pass percentages were obtained by dividing the frequency for the correct answer by N-NR. The figure in each column is the unweighted average of percentages available from various strata in a State.
2. Median value of discrimination indices for various strata as read from Davis[1] chart.
3. The items are given as arranged in the final form.

Table - 3(a) Continued

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
22	45	31	46	33	45	37	39	44	43	27	44	35
23	49	59	41	61	39	66	46	39	45	61	44	61
24	42	52	57	46	38	43	45	30	45	37	43	43
25	49	33	34	48	37	51	49	41	40	52	42	46
26	43	53	48	50	32	49	49	37	34	44	41	51
27	46	27	50	40	36	55	46	18	47	32	39	40
28	34	46	46	41	36	52	31	47	36	57	36	48
29	41	70	32	62	24	41	32	49	29	52	31	51
Ave. %	59.5		54.4		46.4		54.2		53.1		52.6	
Mdn D.I		45.4		45.7		51.6		37.4		48.8		48.0
30	68	38	73	50	69	81	76	38	77	47	73	46
31	74	32	65	46	45	27	79	22	64	34	65	32
32	67	37	61	51	57	58	69	39	56	40	62	44
33	67	34	66	41	64	43	51	31	60	30	62	38
34	70	27	51	57	51	54	58	38	59	25	58	35
35	62	24	58	48	53	50	57	24	54	40	57	40
36	56	30	56	51	42	45	52	28	53	31	51	35
37	54	35	48	31	45	40	53	37	48	39	50	37
38	46	29	41	50	38	58	59	27	56	31	48	43
39	46	29	39	44	48	65	43	26	54	27	47	35
40	60	32	41	52	35	46	32	65	40	34	45	42
41	41	40	48	48	40	56	52	52	45	57	45	50
42	40	46	48	39	46	35	45	46	55	38	44	50
43	44	34	35	36	35	51	43	31	42	41	40	40
44	36	30	31	51	32	52	35	54	38	49	35	45
45	39	44	36	53	22	26	40	50	40	51	35	45
46	34	36	30	39	24	25	37	21	31	52	31	36
Ave. %	58.2		48.6		43.9		51.8		51.4		49.9	
Mdn D.I		34.0		48.5		50.2		33.1		38.7		41.4

Table - 3 (a) Continued

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average	
	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.
47	73	52	70	58	59	67	72	54	68	59	66	58
48	75	31	63	48	42	54	58	43	66	65	61	50
49	73	44	70	45	57	56	72	33	62	42	61	43
50	65	40	47	29	57	54	68	47	61	37	59	40
51	50	44	68	46	58	48	58	48	60	45	58	45
52	63	29	53	45	45	50	67	35	55	30	57	37
53	64	57	58	56	52	56	54	71	54	69	56	60
54	65	47	53	48	46	58	55	57	54	47	54	48
55	65	35	51	36	48	35	53	54	50	53	54	45
56	60	62	55	71	46	69	53	56	50	47	52	63
57	55	50	50	59	42	54	56	45	51	55	50	53
58	61	68	51	81	52	54	53	75	38	62	49	57
59	54	39	47	47	42	43	47	36	53	47	48	42
60	56	64	45	71	37	54	48	62	42	59	45	64
61	42	47	43	50	39	60	48	41	50	43	44	50
62	43	24	41	45	38	55	40	30	42	57	42	50
63	34	48	44	22	43	32	42	36	39	36	41	37
64	51	63	38	70	29	56	38	67	36	58	38	60
65	40	54	42	44	27	42	43	50	30	56	36	52
66	37	50	27	56	24	43	36	52	31	58	31	54
57												
Ave. %	56.3		50.8		44.2		53.0		49.6		50.1	
Mdn.D.I.		47.8		48.2		53.2		49.5		50.7		53.0
67	58	23	46	53	50	34	58	28	46	50	51	36
68	75	20	56	30	61	39	71	23	54	46	63	27
69	55	31	53	42	49	38	49	26	49	21	51	31
70	43	33	38	51	31	33	37	34	35	50	37	42

Contd...

Table - 3 (a) Continued

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average	
	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.
71	44	47	43	62	54	34	36	41	38	49	43	[illegible]4
72	45	38	49	65	29	36	37	41	35	55	39	43
73	71	43	62	48	46	51	58	33	54	41	58	40
74	65	34	62	32	57	46	61	39	69	40	55	36
75	61	55	60	56	60	63	48	49	45	53	39	56
76	45	54	36	53	32	34	40	26	35	49	38	48
77	50	62	41	48	24	37	49	31	37	45	39	41
78	36	39	31	44	27	44	31	32	25	29	30	40
79	72	23	59	27	50	29	66	23	61	27	61	27
80	25	37	25	40	26	40	25	29	28	30	26	36
81	39	29	33	44	37	48	36	42	32	45	33	41
82	52	28	46	27	48	42	51	22	45	22	48	27
83	46	37	37	46	46	33	42	52	40	45	43	44
84	42	24	34	34	38	45	43	25	36	41	39	34
85	30	40	32	52	24	31	34	40	29	48	29	42
Ave.%	50.2		44.4		41.5		45.9		41.9		43.3	
Mdn.D.I.		34.5		45.9		38.0		32.5		44.0		41.0
86	73	40	63	47	61	44	75	31	67	29	68	35
87	59	47	65	42	53	65	62	35	74	45	63	47
88	60	57	63	49	48	69	53	58	55	50	55	55
89	69	48	59	35	47	59	52	39	48	50	55	36
90	59	64	63	58	47	61	59	56	44	59	54	60
91	65	56	67	48	38	37	41	35	55	62	53	50
92	55	59	54	63	45	62	43	58	54	50	50	56

Contd...

Table - 3 (a) Continued

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average	
	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.
93	47	53	47	63	42	69	59	62	49	61	48	61
94	49	49	43	53	44	63	55	42	51	47	48	50
95	51	38	50	51	40	57	47	38	46	48	46	48
96	57	59	46	76	34	56	47	54	38	63	44	58
97	68	30	60	39	61	35	65	34	57	31	43	35
98	53	40	45	44	32	25	41	37	37	52	42	43
99	52	41	42	44	32	54	47	37	38	57	42	47
100	46	69	36	72	27	48	34	62	42	58	37	62
101	49	51	37	55	26	47	45	65	25	37	36	50
102	42	46	51	50	33	41	39	50	46	33	36	44
103	41	63	36	48	31	45	39	62	36	54	35	55
Ave. %	55.3		51.5		41.2		50.2		47.9		47.6	
Mdn.D.I.		49.5		49.5		52.0		49.5		50.7		50.9
104	58	18	66	40	62	44	71	28	69	31	65	30
105	68	48	64	43	53	37	72	07	63	36	64	40
106	69	47	52	60	51	61	67	49	53	68	58	55
107	75	19	46	56	61	36	55	30	51	34	58	35
108	66	39	69	31	35	55	66	30	57	34	57	38
109	56	45	55	47	50	38	61	25	58	44	56	36
110	54	49	51	56	48	57	51	48	54	37	52	47
111	55	46	53	61	41	53	58	53	57	45	52	52
112	31	18	46	43	48	37	53	24	47	51	45	32
113	49	22	47	23	39	39	45	37	37	27	43	30

Contd...

Table - 3(a) Continued

S.No.	Delhi %	Delhi D.I.	U.P. %	U.P. D.I.	Bihar %	Bihar D.I.	Raj. %	Raj. D.I.	M.P. %	M.P. D.I.	Average %	Average D.I.
114	34	52	38	57	39	46	50	57	52	49	42	55
115	47	29	35	46	43	45	39	34	38	50	39	43
116	43	43	37	37	22	22	46	46	32	32	37	40
117	40	59	33	50	30	37	32	53	33	41	34	50
118	36	36	35	43	27	29	32	31	39	46	32	41
119	26	39	31	53	39	57	35	36	35	54	33	51
Ave.%	50.4		47.4		43.0		52.2		48.2		47.9	
Mdn.D.I.		39.5		47.8		39.5		36.2		41.5		43.5
120	66	38	44	60	47	74	70	33	61	55	58	52
121	74	44	73	53	57	81	73	32	73	50	72	48
122	71	29	65	36	57	46	66	33	67	46	65	38
123	73	29	73	32	58	49	69	20	65	22	67	28
124	48	54	43	47	20	52	55	31	46	61	42	48
125	58	51	57	49	50	44	54	53	49	51	55	48
126	72	34	71	43	62	56	81	30	75	44	72	42
127	41	59	39	47	27	31	42	62	41	58	36	54
128	62	57	55	50	52	54	69	31	57	52	59	50
129	63	63	50	49	30	51	75	41	58	70	54	50
130	43	47	35	41	35	40	44	21	41	39	39	40
131	48	32	44	55	38	56	49	33	43	31	44	40
132	43	56	24	38	22	39	38	20	41	39	33	37
133	39	26	41	51	31	43	42	23	35	47	37	38
134	68	47	62	49	47	70	74	56	64	49	62	53

Contd...

Table - 3 (a) Continued

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average	
	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.
135	53	35	42	50	39	54	49	46	49	63	47	38
136	54	28	39	53	34	39	58	29	47	34	52	36
137	65	31	55	44	42	50	59	38	53	40	54	40
138	50	57	43	62	33	64	56	57	47	51	45	60
139	53	53	39	58	37	56	39	42	41	49	42	53
140	51	43	47	57	40	53	50	22	47	60	41	48
Av.%	56.9		49.6		40.9		57.6		52.4		51.2	
Mdn.D.I.		43.2		48.9		52.3		35.1		48.6		45.1

Contd...

Table - 3 (a) Contd.

Pass Percentages and Discrimination Indices of Selected Items.
(Item Analysis stage)
grade VIII - Form N

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average %age	
	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.
1	83	36	65	34	58	53	66	37	72	37	69	36
2.	74	45	67	30	65	42	50	24	65	22	67	25
3.	73	37	61	36	62	32	62	23	61	28	64	33
4.	76	36	58	30	57	31	53	40	63	44	62	40
5.	72	42	54	57	42	33	44	29	58	58	55	40
6.	68	48	52	27	31	40	45	61	50	38	50	45
7.	73	45	47	66	40	42	45	48	51	36	52	44
8.	65	26	57	17	46	46	58	27	51	24	55	26
9.	60	48	43	51	42	50	44	63	40	52	49	52
10.	43	50	44	37	43	37	40	50	46	52	48	50
11.	59	40	44	42	37	37	36	49	44	60	44	46
12	65	33	48	39	48	44	33	30	48	37	39	35
13.	45	26	26	28	27	29	28	50	39	48	33	42
14	45	52	30	31	29	32	33	50	39	50	36	46
15	54	68	32	49	20	22	24	27	38	54	34	45
16	38	28	35	23	30	30	35	48	38	39	35	35
17	50	57	21	49	20	40	27	50	37	61	32	55
18	25	08	27	33	26	24	29	20	27	31	26	27
19.	39	40	25	13	17	15	24	39	24	48	28	37
20	41	50	28	50	27	32	20	48	29	47	30	46
Ave %	58.4		43.2		38.4		39.8		46.0		45.4	
Mdn D.I.		42.4		35.0		35.2		41.5		42.0		41.7

Contd..

Table - 3 (a) Continued

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S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
21	79	46	62	52	66	34	71	36	65	52	69	51
22	52	50	45	53	52	50	46	51	50	59	49	54
23	52	46	49	63	47	61	51	54	53	55	51	56
24	59	62	48	50	53	52	59	44	54	51	55	51
25	51	59	45	54	49	55	48	52	49	61	48	57
26	54	53	40	58	39	58	42	61	48	50	46	56
27	43	47	45	48	41	52	44	56	44	51	44	49
28	33	47	18	64	15	48	18	34	17	51	21	53
29	49	55	37	57	38	71	41	60	43	59	42	60
30	52	59	35	58	36	64	37	57	42	54	41	59
31	38	56	34	55	39	57	40	46	42	51	39	55
32	31	30	41	40	36	44	44	45	46	46	39	42
33	47	60	38	68	34	60	38	46	33	63	37	60
34	47	46	33	39	33	43	39	30	33	50	37	43
35	40	55	32	56	37	57	35	54	34	58	36	55
36	44	49	32	58	27	48	38	53	34	56	35	33
37	42	51	27	61	27	61	32	62	28	51	32	57
38	28	61	30	49	32	56	30	56	35	55	31	55
39	42	49	27	67	20	50	29	49	27	49	30	49
40	40	61	20	69	20	52	29	61	24	50	27	58
Ave.%	46.2		52.1		37.1		40.6		40.00		40.5	
Mdn.D.I.		32.0		55.5		54.5		52.0		54.5		53.3

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Table - 3 (b)

Pass Percentages[1] and Discrimination Indices[2] of Selected Items.

(Item Analysis stage)
grade VIII - Form B

S.No.[3]	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
1.	74	51	75	53	72	67	51	70	56	61	65	58
2	64	40	67	39	54	44	73	20	73	43	66	40
3	69	51	73	52	58	58	71	44	63	52	66	55
4	69	27	72	31	52	48	64	23	69	33	65	34
5	65	47	63	52	48	48	65	44	74	54	63	52
6	66	43	70	42	60	50	62	28	53	48	62	42
7	59	40	60	47	51	60	58	29	64	42	61	46
8	76	30	69	41	32	49	64	30	68	51	61	43
9	64	26	52	33	60	59	51	30	56	47	59	41
10	60	37	70	50	48	47	61	31	55	25	58	36
11	58	51	49	68	60	65	67	45	56	60	58	61
12	69	51	61	35	51	52	57	48	52	43	58	46
13	56	34	62	42	41	27	60	28	65	32	58	30
14	54	39	50	42	54	68	54	51	60	51	55	42
15	49	29	57	45	46	46	45	39	62	45	53	41
16	59	38	52	48	46	47	48	28	59	30	53	35
17	68	45	62	46	38	45	43	53	50	44	52	45
18	59	59	57	55	55	54	33	57	52	44	52	53
19	53	53	46	49	49	48	47	29	52	50	50	46
20	56	54	49	65	30	50	43	62	46	62	45	61

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[1] Pass percentages were obtained by dividing the frequency for the correct answer by N-NR. The figure in each column is the unweighted average of percentages available from various strata in a state.

Contd...

[2] Median value of discrimination indices for various strata as read from Davis[1] chart.

[3] The items are given as arranged in the final form.

Table - 3 (b) Continued

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average	
	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I
21	43	27	48	53	55	61	35	29	42	48	45	46
22	52	36	45	30	47	65	37	39	43	44	45	50
23	48	38	52	47	34	28	49	31	42	39	45	40
24	46	46	47	69	36	44	39	54	48	50	45	50
25	45	25	44	38	37	37	38	23	47	24	42	27
26	46	45	39	39	33	19	46	25	39	45	41	36
27	42	62	44	62	38	55	39	33	37	47	39	53
28	40	49	39	39	32	16	37	44	39	51	37	45
29	32	45	40	42	35	40	32	41	31	33	34	38
Ave.%	56.6		55.7		47.0		50.7		53.6		52.8	
Mdn.D.I		42.3		48.3		48.1		35.9		46.3		45.7
30	73	31	71	38	64	49	77	40	74	40	71	38
31	71	34	62	46	63	51	61	32	65	28	65	38
32	68	39	59	40	60	57	61	38	66	39	63	43
33	61	48	55	46	59	43	50	44	65	49	40	47
34	62	29	48	24	52	50	60	23	55	28	55	28
35	58	33	65	37	45	57	34	18	66	26	54	36
36	69	22	52	38	47	43	52	36	45	33	54	35
37	49	29	52	34	49	44	44	42	51	30	49	36
38	47	42	41	55	45	54	49	44	48	33	47	37
39	52	41	45	46	39	47	58	34	46	33	47	40
40	56	44	49	54	39	60	49	68	45	55	47	56
41	44	39	44	31	49	36	38	28	50	39	45	37
42	47	40	46	50	43	54	39	50	47	51	45	51

Contd...

Table 3 (b) Continued

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
43	51	38	39	52	31	36	45	51	30	24	39	42
44	30	43	24	46	25	43	24	44	29	49	40	47
45	35	46	35	49	45	60	32	51	35	56	36	53
46	47	43	38	47	25	21	30	40	40	33	36	36
Ave:%	54.1		48.5		45.9		47.2		50.4		49.0	
Mdn.D.I.		38.7		43.1		48.7		42.0		35.9		38.9
47	69	42	62	48	59	45	69	42	63	44	64	44
48	66	31	58	20	54	51	67	37	66	37	62	36
49	64	44	59	68	55	72	65	47	62	53	61	55
50	69	47	48	30	57	52	63	35	62	33	60	42
51	71	30	59	31	47	59	59	32	55	35	58	36
52	69	41	55	51	50	70	59	30	54	47	57	50
53	67	42	45	61	40	50	65	42	56	44	55	48
54	58	45	51	47	40	60	57	55	58	54	54	54
55	56	53	50	70	43	67	64	72	54	67	53	68
56	70	37	46	46	48	78	67	39	65	48	52	44
57	64	31	49	43	37	48	52	37	50	42	51	40
58	48	52	51	63	52	56	47	37	42	53	48	55
59	54	68	47	76	42	64	49	57	46	65	47	63
60	51	50	38	56	39	51	48	69	43	63	44	56
61	52	28	40	55	31	48	46	44	48	45	43	44
62	41	48	28	52	34	56	59	39	47	46	42	50
63	47	53	39	57	48	69	37	56	45	55	42	56

Contd...

Table - 3(b) Continued

S.No.	Delhi %	Delhi D.I.	U.P. %	U.P. D.I.	Bihar %	Bihar D.I.	Raj. %	Raj. D.I.	M.P. %	M.P. D.I.	Average %	Average D.I.
64	41	42	38	55	34	47	43	39	36	45	39	50
65	39	46	34	58	36	39	36	56	34	47	37	50
66	44	56	31	57	23	39	38	41	26	49	32	48
Ave. %	57.0		46.4		43.5		54.5		50.6		50.1	
		45.0		53.2		55.0		41.5		46.5		50.6
67	80	31	59	40	63	35	74	40	56	41	67	40
68	58	51	54	46	42	44	63	50	52	47	53	46
69	41	49	[illegible]	57	19	39	30	52	27	47	34	51
70	69	44	55	33	57	38	71	37	65	28	64	38
71	35	50	30	36	27	40	37	20	31	52	32	43
72	72	32	53	38	43	61	66	36	59	37	58	37
73	57	54	41	56	39	62	52	51	38	57	46	54
74	74	31	55	46	48	51	58	28	55	39	58	38
75	49	31	35	45	39	52	43	40	38	42	41	45
76	52	41	56	45	29	50	53	41	58	38	48	42
77	49	61	46	69	44	32	50	42	51	49	48	50
78	48	58	38	58	42	42	41	57	36	42	41	50
79	63	49	58	55	53	38	65	34	51	58	58	50
80	28	50	29	35	26	30	27	30	26	41	27	38

Contd...

Table - 3(b) Continued

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average	
	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.
81	34	40	32	47	21	26	32	28	30	47	30	33
82	27	21	30	34	26	29	25	36	23	33	26	32
83	39	52	29	44	23	33	38	34	24	34	30	36
84.	52	30	47	48	39	36	52	29	48	19	47	30
85	28	34	28	36	26	44	25	37	22	36	28	32
Ave.%	50.3		42.3		36.0		47.5		41.3		42.9	
Mdn.D.I.		45.7		43.6		48.0		37.4		41.4		40.5
86	68	46	73	52	59	53	52	41	58	58	63	52
87	65	25	64	39	55	34	59	47	67	30	61	33
88	68	48	52	76	56	74	71	51	49	78	59	71
89	60	26	56	55	43	48	50	40	59	39	55	42
90	64	47	49	68	38	66	65	54	52	60.	53	51
91	57	45	41	33	41	35	45	35	62	39	50	36
92	59	52	56	50	41	61	47	64	47	54	49	57
93	48	50	58	56	36	56	58	28	49	75	49	55
94	59	41	35	49	37	54	58	18	51	52	47	47
95	50	59	45	65	47	71	19	33	52	66	46	62
96	51	41	45	34	30	50	50	31	46	44	44	40
97	41	60	48	57	44	71	41	54	41	58	43	51
98	54	29	36	28	38	46	46	50	41	50	43	40
99	43	35	41	52	34	32	43	55	33	37	39	50
100	48	58	32	60	28	48	50	77	37	55	39	58

Contd...

Table 3 (b) Continued

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average	
	%	D.I.	%	D.I	%	D.I	%	D.I.	%	D.I.	%	D.I.
101	44	53	37	55	24	[illegible]	39	55	39	57	36	51
102	42	48	38	49	38	29	27	31	32	41	36	40
103	37	56	36	63	32	37	31	49	28	43	33	51
Ave.%	53.2		46.8		[illegible]		[illegible]		[illegible]		49.7	
Mdn.D.I.		46.8		53.8		49.5		47.7		52.4		51.7
104	75	32	69	42	60	69	71	36	71	39	69	39
105	67	21	58	29	54	49	64	21	62	35	62	31
106	57	32	63	58	53	43	61	37	66	46	60	39
107	74	32	75	26	64	34	66	27	71	30	60	30
108	67	47	44	68	46	58	63	36	56	51	56	52
109	62	36	55	34	30	39	69	30	59	46	54	38
110.	54	22	44	32	56	30	51	38	51	27	52	29
111.	59	55	57	46	52	41	56	35	59	55	56	50
112	58	29	45	52	39	53	56	56	51	39	50	50
113	48	43	42	63	36	53	41	32	54	46	45	46
114	42	52	40	59	39	60	47	46	49	54	43	58
115	47	26	26	46	31	47	49	55	39	52	39	48
116	29	38	31	49	27	46	42	45	40	40	37	45
117	43	25	32	36	27	43	37	36	34	36	35	37
118	43	31	33	49	35	51	30	25	38	38	34	38
119	36	51	29	51	30	54	31	46	32	48	32	51
120.												
Ave.%	53.8		46.5		42.4		52.1		52.0		49.0	
Mdn.D.I.		34.5		45.5		47.8		35.7		41.5		39.5

Table - 3(b) Continued

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
120	67	32	55	42	45	42	66	38	66	30	60	35
121	80	40	77	52	61	56	81	38	76	34	75	43
122	74	33	74	51	62	42	70	30	66	34	69	37
123	58	21	54	43	44	64	64	39	45	50	53	49
124	62	44	56	45	48	58	70	64	75	51	62	52
125	47	31	45	46	51	57	50	70	38	36	43	38
126	55	29	53	56	42	50	59	24	69	37	55	40
127	36	40	34	37	27	24	32	46	36	43	33	36
128	63	26	60	51	49	53	64	41	50	45	57	44
129	46	28	45	27	45	32	47	53	42	28	45	30
130	71	35	63	37	51	52	68	45	64	28	64	39
131	78	33	63	45	64	58	74	43	67	47	67	45
132	83	57	68	59	66	74	79	47	72	39	69	53
133	60	42	25	51	28	32	36	46	41	62	35	50
134	67	23	73	35	62	56	66	27	71	29	68	29
135	44	41	48	29	46	41	43	38	50	29	46	33
136	50	50	34	55	31	47	47	64	38	35	37	46
137	72	26	62	57	56	41	70	48	62	37	64	41
138	67	38	58	38	48	55	67	39	66	42	61	43
139	55	33	43	65	34	54	48	61	36	48	43	56
140	30	57	28	53	35	59	22	32	35	53	31	53
Ave.%	60.2		52.8		47.4		58.2		55.0		54.1	
Mdn.D.I.		37.0		48.5		51.8		41.6		37.6		43.4

Contd....

Table - 3 (b) Contd.....
Grade VIII N Form

S.No.	Delhi %	Delhi D.I.	U.P. %	U.P. D.I.	Bihar %	Bihar D.I.	Raj. %	Raj. D.I.	M.P. %	M.P. D.I.	Average %	Average D.I.
1.	80	34	64	55	55	35	62	48	74	38	67	37
2.	73	43	65	39	57	50	63	37	64	36	65	42
3.	79	39	55	32	49	33	51	34	63	42	60	36
4.	74	33	57	50	49	43	62	30	64	43	61	38
5.	74	32	52	25	52	45	53	37	55	43	58	36
6.	71	51	54	31	56	59	49	36	54	39	57	44
7.	59	77	51	39	40	52	45	45	49	52	47	45
8.	61	36	45	17	41	34	48	16	54	35	50	56
9.	61	41	42	61	40	55	43	54	46	53	47	53
10.	47	35	44	26	37	33	43	26	45	40	46	32
11.	51	44	39	41	33	30	42	47	47	51	43	44
12.	61	36	43	22	27	30	43	43	49	39	47	33
13.	48	26	38	48	36	43	40	20	43	33	41	33
14.	44	51	27	43	51	52	30	10	44	46	39	40
15.	47	62	28	54	27	25	29	53	33	59	34	54
16.	38	52	28	43	28	33	23	43	31	54	30	45
17.	44	40	30	16	25	35	32	41	31	35	34	40
18.	37	60	26	38	51	55	12	17	32	45	33	44
19.	31	30	33	34	18	29	17	25	37	43	24	31
20.	38	49	83	40	31	30	25	39	30	26	27	37
Ave.%	64.0		42.7		40.2		40.1		47.3		45.5	
Mdn.D.I.		41.5		37.8		38.4		36.2		42.4		40.7
21.	68	38	67	55	68	51	64	50	64	49	66	50
22.	70	40	57	59	55	58	57	63	40	57	56	55
23.	63	45	49	61	54	45	55	52	33	53	55	50
24.	61	59	43	56	41	51	47	60	46	55	48	59
25.	56	52	44	56	40	54	49	52	45	54	47	55

Contd....

Table - 3 (b) Continued.

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
26.	60	51	46	53	41	59	46	54	41	59	47	55
27.	47	55	33	71	34	56	38	60	33	63	46	62
28.	52	53	38	59	46	51	44	56	45	65	45	59
29.	46	43	37	47	37	48	42	51	43	65	42	47
30	45	41	41	56	35	54	42	62	41	55	41	53
31	51	61	32	60	35	51	34	68	38	52	39	59
32	47	57	33	56	31	54	37	68	35	52	37	58
33.	53	47	28	56	29	65	37	62	34	55	37	57
34.	49	44	33	49	27	39	37	48	35	51	37	44
35.	49	65	29	73	27	64	38	68	34	60	36	54
36	48	30	41	31	38	30	39	29	40	34	34	33
37.	38	60	37	53	28	54	36	69	32	57	33	59
38.	37	52	32	48	30	54	28	42	29	60	31	52
39.	42	51	24	62	23	56	32	64	29	58	28	59
40.	22	45	13	48	13	47	18	60	17	43	17	47
1. Ave. %	50.2		37.9		36.6		41.0		37.7		41.1	
Mdn. D.I.		50.7		54.5		53.3		60.4		54.5		63.5

Contd...

Table - 4(a)

Pass Percentages[1] and Discrimination Indices[2] of Selected Items.
(Item Analysis Stage)
Grade XI - Form A

S.No.[3]	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
1.	71	38	71	27	52	43	73	44	69	57	69	43
2.	77	52	67	39	54	92	83	46	69	51	69	65
3.	60	52	67	44	59	56	71	41	71	54	66	49
4.	60	36	68	34	67	41	77	33	63	45	65	38
5.	61	56	64	46	56	40	69	37	65	43	63	46
6.	75	37	68	36	48	41	58	27	65	39	63	36
7.	66	48	70	36	47	60	70	31	68	38	64	40
8.	59	32	67	36	56	33	68	28	58	34	60	37
9.	51	35	70	22	48	34	77	39	48	45	58	36
10.	59	34	53	36	65	57	57	36	52	47	57	40
11.	60	47	56	49	50	74	57	36	65	33	57	45
12.	61	57	50	64	48	70	64	46	56	67	56	60
13.	55	34	51	47	53	35	60	31	52	30	54	35
14.	48	44	58	54	50	51	50	47	65	56	54	48
15.	61	25	50	39	43	68	43	45	62	43	51	45
16.	65	55	42	54	60	59	38	54	46	42	50	48
17.	59	43	41	64	57	46	46	47	49	62	49	63
18.	48	47	45	68	45	72	56	46	43	63	47	60
19.	56	27	53	24	31	35	53	44	49	44	46	33
20.	45	50	48	57	37	55	52	43	49	66	46	55
21.	40	46	38	31	52	84	56	43	42	62	45	50
22.	43	42	41	50	42	58	42	39	40	60	41	50

For notes 1, 2 and 3, please refer to page No...... table No.4(b)
Contd...

Contd...

Table - 4(a) Continued.

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
23.	41	43	42	53	35	50	63	72	45	55	41	55
24.	38	47	53	37	33	51	30	49	36	60	36	50
Ave.%	55.5		54.8		42.7		59.1		55.6		54.5	
Mdn.D.I.		42.8		39.5		54.5		41.2		49.5		46.2
25.	78	47	67	51	64	40	78	51	63	55	71	50
26.	74	58	67	50	50	61	74	43	70	60	68	56
27.	75	38	70	30	56	44	67	35	69	56	68	40
28.	69.	25	64	22	58	44	72	34	70	27	67	28
29.	74	38	66	50	59	55	77	35	66	60	67	46
30.	67	33	65	43	5[illegible]	66	73	38	61	43	64	42
31.	64	38	59	45	37	54	64	50	53	54	56	48
32.	68	36	60	42	34	59	66	34	50	54	56	42
33.	57	23	51	22	44	54	66	18	51	37	54	28
34.	54	37	50	52	35	54	46	46	50	36	47	45
35.	46	17	45	24	40	34	51	34	47	45	45	33
36.	50	55	41	69	30	52	54	66	46	68	45	63
37.	55	37	42	56	19	41	55	39	43	47	44	44
38.	42	42	41	56	36	54	39	41	40	48	40	48
39.	46	37	36	46	25	49	33	31	33	54	35	46
40.	30	47	28	59	23	57	34	57	30	52	29	55
Ave.%	59.3		52.9		41.9		59.5		52.6		53.5	
Mdn.D.I.		35.8		49.5		52.0		36.3		51.2		45.0
41.	78	28	74	31	51	48	84	19	69	42	73	31
42.	61	24	54	33	36	51	65	17	44	45	54	26
43.	29	42	28	49	22	52	28	51	23	48	26	50
44.	52	25	48	12	34	53	44	43	45	88	45	31

Contd...

Table - 4(a) Continued.

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
45.	66	47	68	40	51	74	73	30	56	66	64	42
46.	66	38	71	36	42	58	74	54	55	27	63	34
47.	47	54	44	32	26	52	41	51	39	58	41	52
48.	68	35	68	34	40	33	71	43	58	25	63	33
49,	51	28	52	26	39	22	51	17	51	30	50	26
50.	44	79	50	79	18	36	49	49	32	60	41	61
51.	43	52	43	54	31	43	49	55	39	42	40	46
52.	53	38	61	36	34	49	64	08	54	40	55	36
53.	58	52	60	57	33	55	70	39	51	52	56	54
54.	72	31	78	34	50	46	85	28	61	31	71	31
55.	59	45	64	44	35	65	77	42	51	54	40	48
56.	69	50	78	49	44	58	83	48	59	58	68	50
57.	37	72	45	46	26	51	43	38	35	53	38	49
58.	52	27	59	40	50	21	52	42	49	32	52	35
59.	68	31	70	27	50	56	73	40	62	46	66	31
60.	77	42	70	41	60	50	77	22	60	39	70	36
61.	71	36	72	24	53	70	74	26	67	29	69	30
62.	39	56	35	53	25	50	41	48	28	57	34	55
Ave.%	57.3		58.5		39.6		62.2		49.5		34.5	
Mdn.D.I.		39.5		39.5		52.5		40.8		46.2		38.5
63.	63	54	59	50	66	52	76	34	73	58	68	52
64.	68	39	74	48	51	49	78	48	67	43	67	45
65.	71	45	74	45	58	45	70	60	52	61	67	50
66.	61	45	74	31	60	60	61	39	79	35	66	40
67.	63	27	66	23	56	42	72	38	70	39	65	32
68.	60	52	68	53	50	56	79	54	61	49	64	53

Contd...

Table - 4(a) Continued

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
69.	66	38	57	52	52	60	68	30	63	43	62	43
70.	51	38	53	35	32	34	51	26	57	40	61	35
71.	55		54	71	51	77	68	59	57	52	58	70
72.	63	26	60	34	38	44	57	31	56	41	56	36
73.	62	32	65	34	40	29	62	24	52	37	55	32
74.	59	44	61	32	45	72	51	25	58	54	55	50
75.	56	34	50	37	52	54	62	35	55	60	55	38
76.	60	45	49	65	46	51	54	44	53	55	54	48
77.	46	30	53	23	61	41	54	30	49	34	51	32
78.	46	52	52	55	41	40	64	45	66	55	52	53
79.	53	43	54	34	44	56	48	26	57	31	51	37
80.	42	50	65	35	56	54	45	35	54	59	50	45
81.	54	53	48	69	46	67	43	46	52	64	49	62
82.	51	38	53	33	[illegible]	[illegible]	43	46	57	68	49	[illegible]
83.	31	[illegible]	50	33	46	58	49	46	51	41	46	45
84.	45	32	42	39	38	30	51	25	47	26	44	27
85.	[illegible]	[illegible]	40	55	46	46	39	23	37	27	40	40
86.	[illegible]		26	40	40	39	34	26	38	61	34	50
Ave.%	53.9		56.1		47.8		57.8		57.6		50.0	
Mean.D.I.		39.5		38.6		50.8		35.8		46.2		44.8
87.	62	39	67	33	31	53	61	31	52	23	55	36
88.	57	34	50	65	49	38	48	40	48	47	50	41
89.	80	45	71	38	46	58	75	29	69	40	70	41
90.	49	59	52	60	30	58	55	49	47	52	48	56
91.	70	38	64	43	52	60	68	27	56	49	63	49
92.	80	36	75	46	65	36	79	24	71	33	75	34
93.	72	20	72	31	59	47	75	34	70	22	70	29

Contd...

Table - 4(a) Continued.

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average	
	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.
94.	31	50	39	62	34	55	47	47	38	63	38	56
95.	66	40	68	26	52	40	67	23	67	19	65	27
96.	33	37	44	61	31	56	40	60	38	55	37	54
97.	59	28	56	34	59	42	51	29	55	35	56	33
98.	66	41	70	46	47	58	74	33	63	32	65	41
99.	54	33	56	37	41	63	53	42	47	43	51	44
100.	70	49	78	42	55	61	72	43	75	38	64	46
101.	54	52	66	58	43	59	50	52	58	42	55	53
102.	63	35	65	38	51	60	60	34	63	35	61	37
103.	64	39	70	50	50	52	75	43	58	55	64	48
104.	35	60	40	63	26	50	42	69	34	54	36	49
105.	73	31	67	38	57	48	71	51	61	41	67	41
106.	58	47	62	22	42	55	60	23	59	36	57	35
Ave.%	59.8		61.6		46.0		61.2		56.5		57.4	
Mdn.D.I.		38.4		42.0		53.5		39.5		41.2		42.8
107.	68	27	62	42	52	44	60	31	68	41	62	40
108.	63	22	57	23	57	38	64	17	64	27	62	26
109.	66	37	64	40	40	33	68	30	65	29	51	37
110.	72	38	63	43	34	38	73	31	55	30	60	40
111.	53	41	56	39	36	39	59	38	65	33	53	36
112.	56	38	56	39	29	46	59	42	58	44	52	44
113.	43	34	51	30	37	29	51	27	51	23	43	28
114.	37	39	48	44	30	30	52	38	52	33	44	37
115.	41	44	42	36	31	28	49	39	49	19	42	33
116.	36	39	46	52.	23	35	48	38	54	35	41	37
117.	48	42	37	30	23	19	42	19	47	33	40	34
118.	40	35	35	45	22	37	46	32	44	35	37	38
119.	32	35	39	41	21	36	43	38	47	26	35	38

Contd...

Table - 4(a) Continued.

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average	
	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.
120.	27	33	46	40	24	36	36	18	38	23	34	34
121.												
Ave.%	48.7		50.14		32.8		53.6		54.1		47.8	
Mdn.D.I.		35.1		40.9		33.9		32.8		31.2		35.5
			Grade XI		N Form;							
1.	80	33	59	47	52	54	73	32	57	37	65	39
2.	79	46	60	42	46	40	68	36	49	35	63	42
3.	73	41	57	49	48	74	57	29	48	57	57	49
4.	66	44	45	25	49	57	55	35	48	27	53	38
5.	65	30	51	20	49	39	51	34	49	38	53	34
6.	70	51	41	48	44	70	58	57	37	29	51	49
7.	70	51	42	42	32	65	49	39	41	59	48	48
8.	64	42	49	49	37	69	55	29	30	55	48	55
9.	75	36	21	25	47	70	62	32	35	60	48	45
10.	62	47	40	36	42	76	58	37	37	29	48	38
11.	69	54	38	48	32	62	49	36	33	51	45	50
12.	66	26	42	44	30	54	42	25	40	55	45	34
13.	59	53	35	41	36	30	41	38	34	51	41	42
14.	62	47	35	46	40	63	33	49	35	46	41	50
15.	55	42	34	20	33	42	46	29	30	25	40	38
16.	56	46	32	40	31	56	37	44	34	47	38	43
17.	43	56	37	35	25	49	35	52	33	50	35	49
18.	49	61	27	53	32	62	45	62	24	39	35	53
19.	44	48	30	49	31	65	28	41	31	44	33	41
20.	44	69	34	47	23	46	32	43	22	41	32	46
21.												
Ave.%	60.1		38.7		37.1		46.9		36.0		45.5	
Mdn.D.I.		46.2		42.6		59.5		36.2		44.5		43.1

Contd..

Table - 4(a) Continued

grade XI N Form

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
21	77	40	63	58	44	73	66	53	60	56	63	53
22.	78	43	61	45	45	65	64	45	54	61	62.	48
23.	74	62	58	65	45	80	65	53	59	78	61.	66
24.	77	45	60	42	38	70	64	56	53	57	60	52
25.	66	50	53	55	42	74	57	49	56	57	57	55
26.	66	49	52	49	38	70	59	54	58	55	55	57
27.	66	51	47	45	43	69	58	53	52	52	54	53
28.	69	44	53	56	35	58	54	56	51	52	53	51
29.	67	50	42	49	39	68	58	37	51	55	52	53
30.	62	41	51	47	36	53	49	37	47	58	50	46
31.	64	50	40	52	36	62	52	52	48	58	49	55
32.	54	37	38	47	27	69	53	50	41	62	44	55
33.	63	62	36	51	28	61	46	49	39	49	44	52
34.	61	53	35	57	26	64	44	46	38	60	42	54
35.	55	52	37	56	26	70	48	56	41	63	42	57
36.	57	51	37	42	30	68	35	33	35	46	40	46
37.	56	54	35	61	23	64	38	43	37	49	39	53
38.	53	45	39	47	20	69	35	49	37	62	37	48
39.	49	54	30	53	22	63	35	56	34	68	35	58
40.	48	47	29	52	25	65	36	54	33	56	35	55
Ave.%	63.1		44.8		33.4		50.8		46.2		48.7	
Mdn.D.I.		50.6		50.6		66.2		50.4		56.5		53.5
41.	69	37	64	53	53	38	62	29	70	39	65	37
42.	60	33	52	47	53	16	62	26	55	47	56	27
43.	59	62	52	60	44	46	59	32	51	56	54	51
44.	59	62	48	38	31	24	51	48	53	52	52	47

Contd...

Table -4(a) Continued

grade XI N Form

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average	
	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.
45	51	60	41	65	32	53	46	58	55	60	47	63
46	48	59	43	56	27	47	45	33	45	57	46	51
47.	49	47	40	68	36	49	42	63	43	49	43	48
48.	48	22	37	48	23	40	43	36	44	32	42	37
49	45	50	34	58	21	41	38	55	45	60	39	52
50.	41	53	32	72	23	45	33	65	43	55	37	52
51.	39	47	36	56	23	29	37	30	41	38	37	42
52.	44	72	31	52	25	45	36	69	33	51	35	57
53.	42	41	27	48	20	12	37	44	33	51	34	47
54.	42	34	35	48	17	10	28	38	30	36	33	33
55.	37	38	29	39	23	32	29	43	30	44	31	37
56.	35	56	31	53	22	22	24	40	31	31	30	51
Ave.%	48.0		39.8		29.6		42.0		43.9		42.6	
Mdn.D.I.		49.5		52.8		39.5		42.0		49.5		47.0

Table - 4(b)

Pass Percentages[1] and Discrimination Indices[2] of Selected Items.
(Item Analysis stage)
grade XI - Form B.

S.No.[3]	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
1.	65	34	75	37	74	43	64	40	68	37	69	42
2.	76	47	70	45	59	77	70	57	68	58	68	60
3.	69	47	64	38	62	42	71	34	64	44	66	42
4.	73	37	66	37	61	45	65	33	64	38	64	40
5.	65	38	62	45	50	41	70	46	57	46	61	44
6.	56	41	56	36	61	42	60	47	68	32	61	36
7.	55	24	58	22	53	17	60	24	81	30	61	24
8.	65	25	57	43	44	51	73	48	61	55	60	50
9.	63	54	56	59	46	69	69	48	63	51	59	56
10.	57	31	56	43	47	67	74	20	59	42	59	36
11.	53	31	60	37	54	50	62	21	59	35	57	35
12.	60	35	61	46	49	23	50	32	58	37	56	38
13.	60	28	64	33	51	64	59	47	47	48	56	45
14.	49	59	58	53	59	60	50	57	52	61	53	60
15.	53	48	60	48	38	56	58	45	53	58	52	48
16.	33	39	54	40	48	51	53	24	73	41	51	40
17.	49	44	45	39	41	69	63	38	55	52	49	50
18.	48	55	47	52	50	43	52	47	50	64	49	53
19.	39	49	58	42	38	62	60	29	50	51	49	45
20.	63	32	47	42	44	44	46	25	37	37	48	35

1. Pass percentages were obtained by dividing the frequency for the correct answer by N - NR. The figure in each column is the unweighted average of percentages available from various strata in a state.

2. Median value of Discriminating indices for various strata are read from Davis Chart.

3. The items are arranged as they appear in the final form.

Contd...

Table - `4(b) Continued

Grade XI - Form B.

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
21.	39	43	51	35	44	62	37	34	54	63	45	50
22.	37	43	44	58	53	61	37	54	40	62	42	56
23.	33	61	42	56	42	65	47	44	37	58	40	56
24.	35	55	33	57	41	52	37	39	55	48	40	50
Ave.%	53.9		56.0		50.4		57.8		56.8		54,8	
Mdn.D.I.		40.7		42.8		55.5		39.5		47.8		47.0
25.	80	42	64	53	61	36	74	45	64	44	71	44
26.	76	40	70	43	66	29	73	40	65	40	70	41
27.	84	22	69	27	54	65	71	32	59	43	69	34
28.	80	51	61	42	43	56	76	51	63	58	65	51
29.	64	47	61	33	55	44	59	19	63	19	61	36
30.	57	24	62	28	56	49	63	60	57	31	59	38
31.	69	43	55	62	34	61	66	60	57	57	58	60
32.	58	44	51	25	45	61	58	35	55	41	54	42
33.	61	53	57	48	31	56	64	40	60	67	53	50
34.	57	51	46	79	37	66	53	64	46	80	48	68
35.	55	47	54	41	40	64	51	50	39	56	48	54
36.	56	45	39	30	71	51	63	36	42	34	48	37
37.	52	25	34	34	50	48	33	29	40	48	47	36
38.	50	55	51	41	27	38	58	23	49	56	47	45
39.	58	51	33	33	36	44	39	69	32	51	38	52
40.	41	32	29	57	24	38	40	52	35	42	34	37
Ave.%	62.4		52.3		44.4		58.8		51.0		54.4	
Mdn.D.I.		45.1		41.5		49.5		42.8		47.8		44.5

Contd....

Table - 4(b) Continued

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
41.	71	35	78	49	50	68	70	28	60	40	67	38
42.	75	33	78	34	67	43	78	43	59	39	71	39
43.	38	37	36	46	27	46	32	37	25	42	32	41
44.	42	27	38	22	26	31	52	11	38	18	40	21
45.	69	52	58	40	43	53	60	37	54	30	58	50
46.	41	35	33	49	28	48	35	27	30	33	34	44
47.	60	30	49	39	36	55	57	19	39	38	49	35
48.	69	30	64	37	48	70	56	46	57	53	60	37
49.	67	30	56	31	43	44	78	26	48	44	58	34
50.	55	40	50	26	36	62	59	23	36	45	48	28
51.	60	37	69	28	59	54	65	32	39	50	58	39
52.	61	4[illegible]	73	39	58	51	66	40	47	41	61	41
53.	68	33	64	42	63	44	63	38	54	43	62	41
54.	46	40	62	40	56	49	62	34	45	54	54	43
55.	39	49	60	43	36	48	50	36	32	43	44	45
56.	56	25	79	30	57	45	62	44	52	34	63	32
57.	60	33	73	38	54	22	67	27	58	33	63	30
58.	76	32	89	25	72	58	85	39	61	30	77	32
59.	70	40	67	46	56	49	77	32	60	36	67	38
60.	32	40	30	48	17	14	34	45	28	28	29	40
61.	65	54	66	43	48	42	68	39	54	36	61	40
62.	39	21	25	25	23	15	34	23	33	52	33	27
Ave.%	57.2		58.9		46.0		59.5		45.9		54.0	
Mdn.D.I.		36.8		38.1		46.5		32.8		39.5		37.5

Contd...

Table - 4(b) Continued.

S.No.	Delhi		U.P.		Bihar		Raj.		M.P.		Average	
	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.	%	D.I.
63.	n.a.	n.a.	71	52	69	50	76	41	75	44	72	46
64.	63	60	78	38	67	45	67	30	77	38	69	40
65.	70	40	72	43	43	60	70	34	67	50	65	45
66.	35	54	65	55	52	76	68	43	68	54	64	56
67.	60	35	64	50	66	43	73	36	65	31	64	37
68.	64	62	69	57	51	78	71	41	61	78	63	70
69.	62	42	63	37	55	51	65	36	60	52	61	44
70.	59	25	69	31	55	41	68	26	65	42	60	33
71.	63	46	59	41	41	65	70	51	58	53	59	48
72.	66	36	58	25	45	51	65	24	54	36	59	32
73.	60	50	57	47	41	49	66	43	59	56	57	50
74.	58	34	61	43	33	50	59	48	61	44	55	46
75.	58	46	56	39	48	33	57	27	48	42	54	37
76.	61	28	53	21	46	27	49	18	47	32	53	24
77.	44	28	56	28	59	43	54	37	55	30	52	32
78.	58	32	49	46	53	50	50	18	46	53	51	48
79.	n.a.	n.a.	54	55	39	58	54	60	53	86	50	60
80.	53	36	54	44	32	38	62	28	45	42	50	38
81.	68	49	74	50	55	72	70	47	72	61	68	53
82.	52	52	48	34	34	42	63	47	45	52	48	50
83.	47	39	52	26	38	44	49	37	48	20	47	32
84.	57	31	47	32	30	19	53	35	44	45	47	30
85.	45	59	50	51	38	54	35	50	37	60	41	55
86.	na	na	39	45	33	47	46	35	40	54	40	47
Ave.%	56.3		57.0		45.5		58.7		54.3		55.8	
Mdn.D.I.		40.5		42.4		50.7		37.0		49.5		43.3

Table - 4(b) Continued

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj %	D.I.	M.P. %	D.I.	Average %	D.I.
87.	32	40	32	54	22	35	39	51	34	63	31	51
88.	71	40	70	34	52	49	79	35	73	38	70	37
89.	48	60	57	68	46	69	38	60	49	70	48	64
90.	87	44	76	55	72	45	82	47	80	47	81	50
91.	62	39	52	48	52	51	72	30	54	41	59	41
92.	63	53	62	31	51	54	65	32	58	39	61	44
93.	76	30	64	36	37	58	70	29	62	38	64	33
94.	52	24	50	41	24	34	52	26	41	53	46	37
95.	35	47	38	70	23	42	36	61	38	59	34	55
96.	52	40	49	64	44	50	65	41	52	38	53	44
97.	72	39	64	51	54	78	62	41	67	43	65	46
98.	79	52	75	52	63	49	76	28	72	41	74	48
99.	50	57	62	53	48	40	62	41	60	53	57	51
100.	79	37	67	44	64	58	94	38	73	50	70	48
101.	50	58	49	54	42	50	64	42	46	57	50	52
102.	53	49	50	54	33	64	65	27	45	58	51	53
103.	50	31	46	46	36	59	63	35	42	41	48	41
104.	58	40	60	35	39	43	69	35	59	49	58	29
105.	46	38	49	49	40	64	53	40	42	60	47	47
106.	26	33	31	42	26	36	41	37	36	41	32	29
Ave.%	55.6		55.2		43.7		62.4		54.2		54.9	
Mdn.D.I.		42.4		49.5		50.9		38.1		49.1		45.8
107.	71	37	71	37	54	35	73	21	73	33	68	35
108.	64	42	60	36	40	42	67	24	71	32	61	35
109.	63	35	62	49	44	41	68	31	64	34	61	38
110.	64	37	63	34	44	36	63	28	62	34	59	35
111.	63	36	58	44	36	57	63	36	69	40	58	43
112.	59	45	44	24	33	25	58	35	54	27	50	32

Contd...

Table - 4(b) Continued

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
113.	54	38	50	42	35	26	57	40	65	44	47	40
114.	29	36	45	43	36	24	48	37	55	40	42	37
115.	31	31	44	42	25	39	51	35	50	40	40	38
116.	41	36	44	52	25	33	46	29	43	31	40	34
117.	37	23	44	38	28	25	38	35	44	30	38	30
118.	38	46	45	40	20	16	33	18	48	41	38	35
119.	24	35	39	26	24	33	37	34	44	31	33	34
120.	34	43	35	54	14	42	40	32	35	30	32	40
Ave.%	48.0		50.3		32.7		53.0		55.5		47.6	
Mdn.D.I.		36.2		41.2		33.5		32.0		37.0		35.9

Table - 4 (b) Contd.

N Form

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
1.	86	25	54	36	61	49	56	42	50	40	61	43
2.	77	39	57	38	48	30	61	36	57	34	60	35
3.	73	40	57	34	49	55	57	26	46	43	57	40
4.	72	40	57	28	47	70	50	24	52	32	56	35
5.	73	43	35	47	42	69	58	45	38	55	50	47
6.	69	42	43	34	41	34	49	39	43	60	49	40
7.	68	29	51	41	30	58	50	50	38	51	49	35
8.	68	45	44	42	40	48	42	43	41	69	48	48
9.	65	43	48	36	35	63	53	55	34	59	48	45
10.	59	47	50	35	39	47	47	28	40	42	48	44
11.	56	50	46	42	39	79	57	35	33	34	47	43
12.	62	46	42	40	37	63	49	28	31	47	45	39
13.	60	46	43	44	32	52	42	52	33	54	43	49
14.	60	51	40	40	30	38	37	59	34	43	42	49
15.	54	56	40	35	30	49	35	52	36	50	35	49
16.	42	25	37	44	33	43	42	39	31	20	37	39
17.	55	38	29	33	36	60	35	36	27	50	36	49
18.	43	45	32	41	29	56	38	51	22	34	33	45
19.	48	67	25	44	26	60	36	45	26	49	33	56
20.	39	63	28	39	26	47	35	42	26	45	31	47
Ave.%	61.5		42.9		37.5		46.5		36.9		45.4	
Mdn.D.I.		44.5		39.5		52.0		41.5		46.6		43.1
21.	75	47	60	73	49	84	64	54	61	67	63	66
22.	76	41	60	57	43	85	69	48	56	59	63	53
23.	76	46	57	63	48	73	58	52	69	54	61	55
24.	75	35	60	50	40	60	59	38	54	42	59	43

Contd...

Table - 4(b) Continued

N Form

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
25.	74	43	57	60	39	69	63	50	58	53	59	54
26.	74	40	55	50	32	71	59	46	56	54	55	53
27.	67	34	54	50	38	60	59	39	48	54	55	45
28.	67	38	50	44	38	71	63	53	48	55	54	55
29.	70	45	50	46	37	62	52	37	50	54	53	53
30.	68	51	47	65	29	71	52	52	48	75	51	64
31.	65	50	49	50	33	64	55	39	47	52	51	50
32.	61	50	43	39	37	70	49	33	47	45	48	44
33.	59	45	39	56	29	69	45	45	41	46	44	48
34.	59	45	38	47	22	60	52	41	43	51	44	50
35.	58	39	47	48	28	70	43	47	39	63	42	44
36.	55	39	40	59	27	71	43	53	42	60	42	56
37.	64	50	35	48	26	63	47	49	37	55	40	53
38.	52	61	28	55	26	68	45	55	37	59	39	56
39.	48	38	32	44	28	66	38	42	39	45	38	46
40.	47	55	26	51	17	47	30	41	35	60	32	53
Ave.%	64.5		46.4		33.3		52.3		47.8		49.7	
Mdn.D.I.		44.5		52.8		68.5		45.8		55.0		52.8
41.	80	36	63	29	40	42	65	33	65	36	67	36
42.	68	25	63	50	52	12	66	33	64	46	64	35
43.	57	55	57	59	39	52	57	63	60	66	56	56
44.	58	59	43	78	30	56	54	53	56	65	51	62
45.	57	54	48	39	38	45	51	35	44	58	49	47
46.	48	47	43	62	26	47	46	56	47	62	45	51
47.	41	41	42	49	34	50	48	54	48	48	44	43
48.	46	48	39	41	25	49	44	55	44	61	42	47

Contd...

Table - 4(b) Continued

N Form

S.No.	Delhi %	D.I.	U.P. %	D.I.	Bihar %	D.I.	Raj. %	D.I.	M.P. %	D.I.	Average %	D.I.
49.	39	39	38	57	29	29	39	39	47	51	41	50
50.	48	63	40	64	19	33	36	56	41	64	40	60
51.	39	47	38	51	24	41	33	46	35	49	36	46
52.	44	40	30	23	25	22	36	37	35	51	36	35
53.	44	49	28	38	20	20	37	34	31	51	34	37
54.	38	61	28	52	18	44	38	63	30	54	32	55
55.	32	44	28	50	27	45	30	46	34	26	31	47
56.	39	40	32	29	30	06	32	41	22	34	30	30
5[illegible]												
Ave.%	48.6		41.3		29.8		44.5		35.2		43.6	
Mdn. D.I.		345.8		51.2		42.4		46.1		53.5		45.5

Appendix II.

Table -5(a)
Pass Percentages and Co-efficients[1] of Items as Obtained in Sample for Norms[2] ____grade VIII

S.No.	Form A Delhi %	Ø	U.P. %	Ø	Raj. %	Ø	M.P. %	Ø	Form B Delhi %	Ø	U.P. %	Ø	Raj. %	Ø	M.P. %	Ø
1.	74	39	81	36	68	37	80	39	76	54	75	60	62	57	64	54
2.	77	37	68	66	68	60	42	49	73	36	71	61	67	42	76	59
3.	67	51	65	65	64	36	57	57	62	31	72	48	61	47	56	65
4.	76	39	60	54	48	54	68	69	61	36	73	45	71	49	70	62
5.	69	41	61	59	69	57	72	62	57	47	64	72	60	56	70	73
6.	53	50	67	61	62	50	65	52	61	71	62	38	67	42	65	52
7.	80	55	67	62	63	68	78	59	59	81	55	71	57	52	54	66
8.	60	68	72	64	58	66	43	49	72	28	64	35	57	57	51	68
9.	67	41	48	50	52	72	47	29	59	34	46	69	30	36	32	63
10.	60	58	69	55	55	37	53	42	57	65	62	52	73	47	56	66
11.	54	66	73	65	60	69	58	57	80	55	65	63	84	43	75	63
12.	81	57	65	79	67	74	61	60	64	57	61	62	67	57	47	49
13.	66	57	53	64	41	48	32	34	44	60	55	55	50	56	55	72
14.	52	30	42	42	50	31	55	48	48	34	48	67	43	40	57	61
15.	54	52	55	55	51	64	47	53	56	52	61	51	45	48	55	59
16.	57	49	42	37	40	52	34	43	62	56	62	59	58	33	59	51
17.	69	54	56	59	62	61	50	50	73	50	69	51	49	28	27	35
18.	57	46	47	30	53	58	49	42	56	69	59	61	25	35	45	64
19.	72	51	48	57	53	61	43	56	50	43	38	60	39	43	48	60
20.	47	66	48	69	38	46	46	59	47	71	36	56	40	46	41	64
21.	59	46	47	40	33	27	55	69	36	52	40	62	39	46	32	50
22.	49	39	44	62	36	25	40	69	74	56	64	65	60	49	45	75
23.	40	49	37	63	35	49	40	63	53	63	58	56	54	53	48	71
24.	38	49	54	50	61	59	47	53	53	63	45	43	43	23	51	71
25.	46	39	39	42	39	48	35	44	41	54	37	40	37	32	40	69

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1. Correlations have been worked out with the scores on the relevant subtest.

Contd..

2. These statistics were obtained from the randomly selected sample of N = 200.

Table - 5(a) Continued.

	Form A								Form B							
S;No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
26.	36	49	46	60	37	51	33	34	42	52	50	55	59	44	59	78
27.	87	35	82	55	84	42	84	49	55	62	61	65	53	58	60	64
28.	39	34	58	54	38	41	51	63	37	37	39	52	34	26	29	31
29.	34	38	27	39	17	27	18	20	44	49	45	58	57	48	47	57
Ave.%	59.5		55.3		52.0		51.4		57.2		56.2		53.1		52.5	
Mdn.Ø		46.5		57.0		51.6		61.1		55.0		57.8		44.8		63.0
30.	72	46	77	56	74	55	73	59	74	35	73	50	86	23	67	34
31.	66	41	60	62	70	52	52	39	76	32	68	54	75	31	62	62
32.	64	47	69	62	62	49	54	49	40	54	35	51	41	54	39	59
33.	48	54	51	53	41	43	39	41	67	34	69	56	64	49	67	65
34.	54	58	37	62	35	57	41	72	79	38	63	56	75	33	62	54
35.	54	57	55	57	45	48	50	67	52	43	74	64	35	50	53	70
36.	59	73	64	55	52	57	49	71	69	62	62	49	55	51	39	49
37.	51	36	45	56	52	60	44	63	60	52	67	54	59	45	64	58
38.	64	64	65	62	89	62	64	75	43	39	37	51	41	36	34	52
39.	36	30	44	32	48	48	52	70	71	52	52	57	54	55	42	50
40.	53	60	43	47	50	74	49	48	46	51	32	40	42	56	32	56
41.	37	45	33	45	38	38	40	46	32	51	26	50	35	52	36	66

Contd..

Table - 5(a) Continued

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
42.	29	38	57	42	44	62	47	59	39	41	55	38	59	40	52	70
43.	44	54	38	70	42	52	29	52	51	58	36	31	40	46	28	34
44.	34	29	43	67	29	39	31	43	53	51	39	58	50	38	27	44
45.	39	39	35	55	36	41	28	38	36	47	39	73	37	48	32	59
46.	40	43	41	41	40	54	37	14	74	43	61	74	70	51	45	66
Ave.%	49.8		50.2		48.9		46.1		56.8		52.0		54.0		46.2	
Mdn.Ø		46.0		55.3		52.0		51.2		48.3		54.0		46.5		55.9
47.	65	65	64	75	69	67	57	59	61	47	61	56	70	50	61	48
48.	59	48	60	75	52	56	45	64	68	36	70	52	73	41	58	57
49.	66	56	69	67	68	75	36	56	46	53	60	71	68	52	50	76
50.	57	58	51	74	68	55	46	61	58	54	60	51	71	51	57	76
51.	40	36	76	57	60	64	55	49	56	53	50	43	59	40	34	44
52.	61	48	42	49	60	37	50	31	57	53	50	54	59	78	35	70
53.	53	68	55	76	45	68	40	69	64	61	53	56	61	53	40	69
54.	58	59	55	76	60	71	45	55	52	58	49	62	55	26	42	52
55.	52	52	48	64	53	62	36	53	51	67	47	61	60	81	34	64
56.	43	60	55	65	53	45	39	69	65	58	48	52	62	62	40	57
57.	49	71	58	81	55	78	39	57	60	58	51	54	46	30	45	44

Contd..

Table - 5(a) Continued.

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
58.	51	83	58	81	35	57	26	43	44	69	51	61	43	53	34	66
59.	49	64	52	76	58	47	50	67	49	65	48	63	46	41	28	50
60.	50	52	59	65	55	66	32	55	49	73	43	54	48	47	32	50
61.	43	49	46	51	47	33	39	41	62	47	47	49	55	45	39	74
62.	26	45	37	46	37	31	24	40	41	45	33	44	44	58	32	45
63.	19	03	31	23	20	52	29	53	46	64	46	67	35	57	28	48
64.	42	74	42	80	33	68	18	54	51	43	51	65	44	31	31	64
65.	63	47	53	55	55	64	29	33	27	50	28	41	28	30	30	60
66.	25	38	26	55	22	46	20	41	33	57	36	46	29	50	27	47
Ave.%	48.8		68.8		50.5		38.2		52.2		48.3		50.3		39.2	
Mdn.Ø		53.5		67.0		59.5		53.3		55.0		55.7		50.6		57.5
67.	47	39	46	62	51	35	43	33	70	32	50	78	78	34	47	71
68.	64	52	60	42	63	36	56	46	48	74	49	67	50	49	48	72
69.	38	60	42	62	46	37	45	42	38	55	30	56	24	54	22	47
70.	37	39	34	39	29	21	29	22	62	56	42	80	49	52	52	62
71.	34	60	37	60	36	45	24	52	26	36	29	46	26	34	23	38
72.	36	39	35	61	30	59	28	35	57	55	51	70	50	57	46	56
73.	56	42	48	68	52	51	44	62	53	51	33	60	38	47	32	48
74.	44	31	48	43	34	40	31	31	54	63	35	65	49	52	47	67

Contd..

Table - 5(a) Continued

S.No.	Table A								Table B							
	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
75.	22	48	30	47	27	40	39	64	35	28	28	27	32	24	37	50
76	28	41	22	40	34	32	24	41	52	66	49	67	53	59	47	65
77.	37	41	82	51	29	33	32	49	52	64	46	78	38	42	38	55
78.	33	38	36	43	28	41	23	30	31	51	31	50	33	82	34	71
79.	56	36	53	55	61	38	55	61	37	50	46	61	49	57	32	37
80.	27	40	25	39	25	38	31	64	27	36	19	33	20	31	19	22
81.	31	53	31	34	31	35	28	35	27	43	23	41	35	41	29	39
82.	46	44	43	43	46	41	38	41	28	31	23	40	24	24	16	34
83.	34	41	36	56	42	22	37	55	28	45	25	45	35	44	21	44
84.	39	38	34	49	47	35	33	22	36	49	45	40	50	36	47	29
85.	19	29	18	46	22	42	15	36	28	42	22	41	23	43	20	47
Av.%	38.5		37.3		38.9		34.7		41.8		35.3		39.7		34.8	
Mdn.Ø		41.6		47.6		38.1		42.5		50.3		57.0		45.5		48.3
86.	60	61	56	64	56	47	56	50	71	69	70	63	56	70	53	70
87.	57	57	66	70	46	66	61	60	58	39	55	56	62	36	51	57
88.	51	49	57	63	52	64	47	55	52	59	45	69	59	65	40	72
89.	50	82	42	50	30	42	37	42	60	69	68	59	78	53	64	71
90.	46	63	49	65	53	58	42	59	51	77	49	82	55	64	33	69
91.	42	58	52	74	25	55	41	51	36	46	34	31	40	16	48	48
92.	45	66	17	57	41	71	45	73	51	65	52	44	48	65	42	81

Contd...

Table - 5(a) Continued

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
93.	39	66	48	77	44	60	50	75	45	76	53	71	53	65	47	74
94.	39	61	49	69	47	62	47	66	53	61	47	63	60	67	48	74
95.	45	46	48	55	45	53	32	51	52	63	42	78	33	55	48	83
96.	54	73	42	74	26	42	38	67	51	62	42	63	40	59	38	67
97.	58	60	61	64	60	54	55	48	37	57	57	65	50	63	40	61
98.	42	57	47	55	36	50	33	40	42	60	45	43	42	37	33	45
99.	38	48	38	53	38	57	29	45	42	51	35	46	30	40	34	63
100.	32	65	39	60	29	39	37	62	55	83	45	76	49	71	35	74
101.	26	30	35	40	34	56	24	41	40	53	46	58	35	39	36	48
102.	34	60	49	67	33	52	36	60	38	29	40	60	29	26	32	44
103.	36	47	42	57	32	22	28	42	38	49	43	62	39	19	37	48
Ave.%	44.3		48.2		40.6		41.3		49.2		48.3		48.0		42.5	
Mdn.Ø		60.7		62.4		54.5		67.0		60.9		62.4		56.2		67.0
104	61	68	59	46	63	47	54	65	58	58	60	55	62	51	66	49
105	44	59	41	46	51	65	30	55	58	57	50	53	51	34	48	49
106.	50	61	42	55	44	66	26	53	48	60	47	74	55	55	45	67
107.	69	40	40	55	36	34	24	49	62	48	64	44	70	55	63	53
108.	47	59	54	66	59	52	41	42	54	75	42	77	62	57	47	70
109.	54	75	59	66	61	37	40	42	57	47	52	56	63	49	38	56

Contd...

Table - 5(a) Continued.

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
110.	51	60	43	58	52	38	35	39	58	67	51	69	54	55	47	62
111.	[illegible]	44	32	54	40	33	32	42	41	31	46	56	54	41	39	54
112.	31	49	33	33	37	22	24	42	45	45	44	60	50	43	38	63
113.	43	46	37	33	49	43	34	38	61	64	53	70	65	50	42	67
114.	30	75	35	62	36	55	30	53	30	44	43	69	35	40	31	48
115.	29	48	31	45	33	27	31	11	42	63	32	58	41	45	30	57
116.	23	45	26	39	29	41	20	25	21	28	27	37	25	27	34	50
117.	54	[illegible]	52	66	56	65	45	53	33	57	27	53	43	48	24	44
118.	30	57	35	50	31	48	20	47	35	57	26	36	25	27	23	50
119.	24	40	39	48	36	21	40	62	45	38	27	56	32	40	30	58
Ave. %	43.1		40.9		44.8		33.1		47.1		42.9		49.2		40.1	
Mdn.Ø		52.8		51.5		42.0		47.0		52.0		56.6		[illegible]		55.2
120.	45	60	36	51*	57	54	44	59	50	57	50	60	47	53	51	76
121.	53	66	56	80	48	53	46	73	73	65	63	76	67	66	59	65
122.	42	51	52	50	43	53	42	61	67	52	55	60	60	67	53	53
123.	57	40	53	61	59	54	47	50	56	68	44	60	47	62	40	46
124.	44	77	45	50	48	73	45	79	55	78	51	81	69	64	56	69
125.	45	54	56	75	54	55	44	65	65	69	57	66	62	69	45	72

* For this variable, N = 190.

Contd..

Table - 5(a) Continued

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
126.	51	73	54	78	62	76	56	75	52	64	46	58	44	56	41	65
127.	41	51	44	61	34	49	30	53	31	38	30	37	33	38	35	56
128.	50	72	41	57	48	54	48	62	53	57	49	60	55	59	40	67
129.	51	66	39	57	66	78	45	71	40	54	43	48	46	50	41	62
130.	46	57	31	50	32	35	37	53	60	72	56	64	55	54	47	55
131.	41	76	46	63	47	73	35	70	66	65	58	68	69	67	55	74
132.	35	72	31	66	41	62	30	63	67	73	62	77	73	69	50	74
133.	22	47	26	48	23	56	26	52	55	79	35	69	44	73	42	73
134.	48	84	46	78	52	83	39	78	66	65	61	61	67	60	50	81
135.	41	64	27	34	41	46	28	43	39	43	43	47	43	55	44	59
136.	43	44	33	55	40	53	23	47	32	53	25	38	28	35	32	38
137.	45	55	46	46	56	59	41	50	61	80	56	67	57	68	44	61
138.	42	71	38	67	35	57	29	61	53	64	52	65	54	55	47	68
139.	54	53	34	53	33	55	29	58	44	70	44	62	49	54	30	70
140.	50	49	48	65	43	42	39	56	38	60	43	67	40	46	36	78
Avg,%	45.2		42.4		45.9		38.9		53.6		42.5		52.9		44.9	
Mdn.Ø		60.7		60.3		55.4		70.5		63.9		63.7		58.4		65.2

Table - 5(a) Continued

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
141	93	34	83	52*	92	31	82	34	90	28	75	43	88	30	86	48
142.	78	30	76	40	81	22	60	43	79	46	76	45	78	60	74	52
143.	80	34	70	43	76	36	64	59	76	63	64	74	69	72	70	58
144.	78	37	66	63	60	47	64	40	92	39	69	42	81	34	78	45
145.	69	54	72	69	73	58	56	58	77	61	61	56	61	66	63	81
146.	77	4[illegible]	60	76	63	57	48	71	82	44	66	78	76	56	73	58
147.	79	5[illegible]	63	71	66	43	60	54	70	62	60	67	67	63	56	76
148.	54	4[illegible]	57	48	54	38	45	40	53	61	47	48	55	52	61	60
149.	81	33	55	74	57	63	37	51	66	76	55	71	57	55	58	75
150.	77	51	60	72	62	53	51	66	63	70	63	62	58	63	57	66
151.	76	49	56	53	71	50	57	71	45	58	57	42	55	63	64	77
152.	47	45	54	47	35	42	35	50	70	57	59	48	52	52	64	59
153.	58	55	41	65	32	52	44	53	49	28	42	42	46	20	44	71
154.	48	52	37	61	49	56	32	53	36	53	25	49	34	44	46	66
155.	65	58	42	65	40	58	37	73	37	67	35	68	36	53	36	78
156.	50	48	39	50	29	34	35	36	42	63	30	55	38	55	35	65
157.	61	69	41	72	38	60	36	75	38	59	46	53	46	61	36	42
158.	32	40	20	19	18	26	22	27	40	74	29	52	27	16	38	46
159.	55	61	38	67	46	51	34	53	36	44	38	40	28	18	32	38

* For this variable, N = 190.

Contd...

Table - 5(a) Continued

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
160.	43	52	26	66	19	59	28	37	41	51	33	67	39	51	33	54
Ave.%	65.4		52.5		53.3		46.7		59.4		51.6		54.5		55.4	
Mdn.Ø		47.8		62.4		50.6		63.3		57.5		52.0		55.2		57.8
161.	87	41	72	65*	75	68	71	77	70	60	71	54	74	58	69	82
162.	59	75	56	86	53	81	37	72	70	74	65	87	66	69	52	87
163.	66	58	54	73	49	78	44	69	66	87	63	69	65	69	54	89
164.	69	60	57	89	58	71	43	78	56	81	56	77	55	74	52	84
165.	65	85	54	85	51	85	30	72	52	89	62	88	57	84	42	85
166.	58	72	44	89	46	86	22	71	59	85	57	77	62	82	45	74
167.	62	71	39	86	50	83	22	62	57	87	59	85	52	84	39	69
168.	54	62	38	83	48	82	29	77	54	96	51	81	50	84	37	79
169.	58	74	42	85	44	86	30	82	45	91	47	76	50	83	33	78
170.	57	82	47	83	51	78	27	71	53	90	55	83	52	91	32	78
171.	60	78	46	73	35	71	38	85	51	96	48	83	50	86	30	80
172.	61	92	49	86	56	78	41	84	50	89	46	[illegible]	50	83	32	88
173.	53	80	39	82	44	91	25	74	52	89	55	90	52	84	36	95
174.	46	66	36	61	30	77	16	56	48	79	41	85	40	77	26	75
175.	61	86	35	78	29	78	23	66	46	94	41	86	46	85	24	77
176.	44	74	35	87	32	70	17	52	54	79	42	68	39	73	29	74
177.	48	86	29	75	28	75	18	56	42	84	41	74	41	86	25	78
178.	56	82	31	75	34	74	17	55	44	80	33	69	39	84	23	68

*.1. For this variable, N = 190.

Contd....

Table - 5(a) Continued

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
179.	52	74	28	59	35	60	26	66	34	81	38	71	34	70	22	69
180.	42	72	25	70	29	69	13	47	37	62	27	66	33	56	22	69
Ave.%	58.1		42.6		44.3		29.8		52.0		49.8		50.3		36.4	
Mdn.Ø		75.7		80.4		76.5		70.8		74.5		79.5		81.3		77.0

Table - 5(b)
Pass Percentages and Coefficients[1] of Items as Obtained in Sample for Norms[2] - grade XI.

S.No.	Form A								Form B							
	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
1.	76	43	76	41	85	48	73	53	57	69	62	59	62	51	72	43
2.	67	47	58	57	75	56	64	55	76	62	71	69	71	58	71	55
3.	55	60	57	76	70	62	75	58	65	65	61	52	74	48	64	58
4.	68	36	73	43	79	29	76	37	53	61	45	55	43	49	38	63
5.	47	42	61	69	66	71	65	52	66	61	58	68	72	64	62	52
6.	61	28	59	40	52	67	65	57	51	63	64	64	75	53	74	52
7.	57	61	73	47	56	61	72	54	28	08	56	31	63	35	75	40
8.	50	24	67	44	73	38	56	56	71	52	42	47	65	50	49	64
9.	74	41	85	35	44	50	63	41	54	66	44	81	68	41	60	71
10.	31	24	58	48	48	59	52	58	50	64	52	58	79	34	49	68
11.	43	68	63	56	73	45	59	44	58	44	53	38	67	40	64	31
12.	53	60	41	67	55	55	54	66	55	52	61	59	58	51	53	55
13.	46	37	45	30	55	61	53	68	53	50	56	63	56	51	46	53
14.	20	55	47	71	63	57	52	65	45	61	45	73	40	72	57	75
15.	50	34	50	76	43	39	68	58	41	72	50	66	48	69	50	81
16.	40	63	34	59	29	34	37	46	34	50	67	40	62	48	83	38
17.	47	71	46	70	43	65	51	65	53	48	40	26	69	41	61	68
18.	28	43	42	68	49	80	34	48	40	64	43	59	41	45	44	68

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1. Correlations have been worked out with the scores on the relevant subset.
2. These have been obtained from the randomly selected samples of N = 200.

Table - 5(b) continued

S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
19.	45	51	59	31	52	55	54	48	43	70	75	41	70	56	38	69
20.	34	56	59	56	49	65	43	52	53	67	49	62	45	29	33	57
21.	31	33	40	58	54	59	36	62	43	66	38	62	38	41	44	66
22.	32	43	35	57	45	46	42	37	34	65	40	46	37	49	47	53
23.	34	41	46	71	49	69	46	42	30	57	38	46	35	59	47	72
24.	27	43	58	59	39	57	47	50	34	60	27	45	23	6[illegible]	54	63
Ave.%	46.7		55.2		56.4		56.0		49.8		51.2		56.9		55.9	
Mdn.Ø		45.8		53.8				53.14		52.4		54.5		49.5		59.5
25.	66	48	74	53	72	64	58	56	82	56	62	51	76	55	74	51
26.	65	52	65	59	63	59	60	58	76	54	75	41	71	11	68	34
27.	63	59	68	56	71	41	53	62	64	51	54	39	62	52	53	61
28.	54	25	66	56	75	46	66	4[illegible]	72	53	50	59	66	71	53	72
29.	70	53	58	56	74	50	68	59	53	43	45	28	49	36	46	56
30.	59	56	61	61	71	50	60	68	38	35	47	67	45	52	41	38
31.	50	56	67	67	64	74	51	60	66	69	60	61	67	75	56	68
32.	52	48	60	60	66	60	44	68	55	37	54	60	54	54	54	53
33.	61	35	54	27	61	30	52	40	51	49	48	71	59	50	43	61
34.	54	67	59	50	60	52	54	69	56	61	45	78	62	63	48	68
35.	46	44	56	62	62	38	54	44	52	61	44	47	54	54	48	57

Contd...

Table - 5(b) Continued

	Form A								Form							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
36.	33	55	39	67	41	76	35	66	51	41	35	33	55	52	36	37
37.	45	71	42	66	51	64	33	59	65	47	44	51	68	42	58	57
38.	47	70	48	73	53	65	41	68	65	61	38	47	64	49	47	68
39.	39	48	33	53	34	59	25	49	53	58	24	48	61	58	32	67
40.	26	37	24	63	39	75	26	66	65	66	60	56	69	40	59	48
Ave.%	52.1		54.4		59.9		48.9		61.1		48.8		59.8		51.2	
Mdn.Ø		51.2		59.5		57.5		59.5		53.5		52.0		58.2		57.5
41.	72	40	60	45	68	43	59	53	64	67	65	63	67	49	60	58
42.	45	40	41	30	46	24	46	48	74	53	73	46	75	45	66	58
43.	17	42	15	39	26	36	19	48	39	64	34	21	44	26	33	27
44.	41	44	38	50	43	60	40	53	51	49	52	61	61	22	51	44
45.	52	56	41	54	74	44	54	55	57	65	43	48	65	61	57	42
46.	67	33	62	40	78	29	61	49	45	50	26	48	40	63	29	53
47.	25	42	28	46	35	46	32	63	45	64	40	44	49	41	36	38
48.	61	58	58	42	66	10	68	52	61	47	59	71	54	47	61	41
49.	42	59	46	33	50	29	44	38	61	64	52	42	71	39	48	61
50.	32	64	32	66	51	85	29	63	53	68	48	61	62	57	45	46
51.	44	62	36	39	49	70	39	52	51	62	72	47	60	40	40	53
52.	46	46	48	45	45	48	43	53	53	53	74	56	62	52	54	65

Contd......

Table - 5(b) Continued

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
53.	55	55	47	68	61	67	50	66	58	63	53	57	65	38	52	44
54.	60	42	62	4[illegible]	78	58	53	58	37	43	52	52	54	43	42	56
55.	52	56	50	73	71	75	42	72	36	37	57	55	46	47	27	33
56.	55	75	55	69	75	60	55	82	58	55	77	66	66	56	52	65
57.	41	60	36	48	58	69	30	66	49	54	57	40	54	50	55	51
58.	43	62	46	44	57	67	38	63	61	57	84	61	76	60	68	45
59.	56	64	43	64	65	59	55	64	59	67	52	63	78	48	62	45
60.	56	33	56	60	65	31	52	49	45	39	34	28	42	38	26	50
61.	63	57	66	43	69	56	63	41	63	44	52	49	63	52	33	45
62.	24	46	25	59	39	34	29	54	41	50	41	41	47	57	37	44
Ave.%	47.9		44.9		58.4		45.8		53.1		54.2		59.1		47.2	
Mdn.Ø		51.2		47.3		49.5		55.7		56.6		49.5		47.0		48.4
63.	56	65	71	60	76	59	81	50	58	61	65	51	79	45	74	30
64.	56	61	71	66	75	59	69	52	59	64	57	52	67	44	69	55
65.	58	72	74	54	75	39	55	51	68	50	68	59	84	38	70	50
66.	54	55	76	55	61	62	82	58	48	68	40	74	56	64	42	66
67.	59	67	71	54	70	69	69	34	59	64	73	57	87	32	70	66
68.	52	64	63	74	78	41	63	53	69	74	59	62	76	46	60	70
69.	66	72	64	54	67	55	65	69	61	52	53	44	72	45	54	50

Contd...

Table - 5(b) continued

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
70.	39	54	53	55	52	66	52	63	47	39	61	43	74	35	60	62
71.	42	67	58	51	62	51	50	67	69	57	67	68	78	50	60	70
72.	55	48	56	59	60	40	60	65	66	55	64	52	76	47	66	52
73.	66	43	66	58	67	52	66	50	60	77	51	68	66	61	60	74
74.	52	67	48	69	56	38	49	90	62	45	49	55	68	44	57	51
75.	35	61	43	51	52	43	48	47	43	58	59	60	62	54	48	50
76.	52	61	42	84	50	45	38	72	48	47	44	21	37	62	47	42
77.	41	58	60	37	55	40	58	35	41	59	52	69	50	59	47	68
78.	34	48	40	69	55	54	53	71	51	59	38	42	58	49	43	60
79.	61	58	51	43	56	52	61	58	42	57	51	72	58	53	55	80
80.	35	54	43	46	44	42	46	43	60	62	54	74	68	44	49	48
81.	39	65	49	62	51	63	46	53	59	71	74	57	66	49	50	66
82.	50	55	48	64	49	63	42	57	50	60	39	44	72	46	40	65
83.	32	21	39	24	52	50	42	50	43	42	40	36	49	45	43	62
84.	32	31	42	32	45	21	42	45	50	51	45	36	61	55	30	58
85.	31	28	39	39	40	37	37	35	44	56	51	57	37	55	44	66
86.	28	45	27	35	52	36	32	50	30	41	33	62	28	53	31	52
Ave.%	47.1		53.6		58.5		55.1		53.9		53.4		63.6		53.5	
Mdn.Ø		57.8		55.0		52.0		55.0		56.5		55.7		47.7		60.6

Contd..

Table - 5(b) continued

S.No.	Form A								Form B							
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
87.	43	45	50	48	53	58	51	42	38	52	33	64	35	65	45	54
88.	45	65	37	61	46	58	38	57	67	61	68	56	77	41	77	44
89.	63	68	74	52	64	70	63	72	42	71	45	79	52	66	45	58
90.	38	64	43	62	57	61	41	54	77	64	71	55	83	38	72	55
91.	58	64	61	68	61	58	54	59	57	57	37	65	74	41	53	52
92.	42	36	56	55	52	34	42	30	63	55	58	58	66	48	52	48
93.	61	33	57	57	57	43	49	61	64	56	47	61	68	63	46	49
94.	33	35	32	53	47	51	48	67	51	45	40	49	54	40	45	28
95.	52	40	59	37	65	50	56	37	42	74	31	67	44	79	43	70
96.	27	35	42	61	37	48	36	47	52	59	48	51	61	57	38	56
97.	43	31	58	46	51	56	45	54	66	52	59	53	71	49	58	76
98.	60	68	60	61	67	63	54	67	80	60	65	70	80	47	69	55
99.	48	56	35	25	55	53	45	74	45	54	50	63	51	54	50	74
100.	53	80	62	72	67	70	63	86	81	64	60	60	94	29	74	69
101.	39	67	58	79	55	69	51	79	55	69	37	64	72	52	40	57
102.	55	65	60	61	46	58	50	51	53	33	61	63	73	49	42	75
103.	65	57	62	68	74	59	66	59	49	47	30	40	64	50	41	74
104.	36	69	30	64	44	74	39	74	48	48	47	62	50	44	56	65
105.	67	48	64	35	77	51	62	55	47	42	38	51	55	42	36	69

Table - 5(b) continued

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
106.	40	42	51	59	42	39	44	50	29	43	29	42	41	59	33	66
Ave.%	48.6		52.3		56.0		50.8		55.5		47.5		63.5		51.0	
Mdn.Ø		54.6		59.5		55.5		57.0		55.2		60.4		48.6		59.5
107.	40	62	51	69	54	54	45	64	76	65	74	56	83	50	80	67
108.	67	69	53	52	57	60	54	86	38	44	42	56	61	55	44	52
109.	54	74	50	60	69	55	56	71	62	76	56	80	81	46	61	71
110.	53	80	62	87	63	58	52	77	55	65	54	68	62	55	57	69
111.	59	83	72	81	78	66	69	85	65	57	61	71	74	63	65	84
112.	46	81	51	77	60	79	51	87	43	72	34	76	62	67	44	77
113.	42	52	57	79	55	47	55	68	78	73	75	69	88	44	77	75
114.	67	79	65	82	73	73	66	84	77	77	66	78	81	47	74	87
115.	33	68	45	71	46	80	42	54	66	76	63	69	84	52	62	85
116.	59	86	61	84	65	84	56	96	50	[illegible]0	37	75	57	76	43	76
117.	34	67	36	69	42	79	33	73	52	69	47	78	59	69	47	77
118.	37	83	42	82	42	85	36	79	36	60	43	82	50	69	49	76
119.	49	76	48	79	53	73	54	77	59	63	55	73	67	78	51	81
120.	33	57	49	91	51	60	44	75	34	61	31	69	58	81	30	53
Ave.%	48.3		53.6		58.1		51.1		56.8		52.4		69.3		56.2	
Mdn.Ø		72.8		77.0		69.5		77.2		68.1		71.2		59.5		74.5

Table - 5(b) Continued

S.No.	Form A								Form							
	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀	♂	♀
121.	76	30	77	75	67	80	52	58	92	[illegible]	71	54	52	64	79	53
122.	79	61	72	66	67	75	65	72	75	45	62	52	71	39	67	53
123.	67	63	64	76	53	82	53	84	69	50	74	37	57	48	65	53
124.	71	47	72	51	67	61	68	36	78	54	74	53	70	56	71	69
125.	71	56	59	73	58	67	63	51	72	51	64	57	73	57	68	39
126.	67	64	63	80	60	74	56	61	81	46	77	55	78	46	72	68
127.	69	69	67	76	63	78	59	73	69	55	85	49	70	63	63	64
128.	60	64	63	66	69	73	37	68	75	62	86	79	67	70	65	73
129.	70	60	35	62	74	66	39	70	75	57	70	71	56	57	58	83
130.	57	69	59	69	50	71	43	69	69	71	56	58	60	84	60	62
131.	58	75	48	84	50	92	49	75	51	71	51	54	55	56	43	69
132.	76	51	66	56	65	78	65	76	63	67	54	54	54	69	52	59
133.	74	60	64	76	65	59	60	70	65	68	64	70	54	82	69	63
134.	58	65	54	84	53	88	47	69	56	71	45	70	54	78	42	53
135.	39	47	48	72	38	61	36	39	51	71	51	57	48	60	46	64
136.	56	73	47	78	42	69	50	65	43	51	54	59	49	70	30	84
137.	45	70	51	81	45	74	30	73	61	68	57	48	56	85	49	76
138.	[illegible]	56	52	69	53	80	[illegible]	69	46	55	28	70	[illegible]	86	32	[illegible]

Contd...

Table - 5(b) continued

	Form A								Form B							
	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
S.No.	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
139.	49	78	45	72	43	80	35	64	52	66	38	61	49	66	39	68
140.	50	86	55	84	48	77	35	56	42	49	35	53	40	74	38	62
Ave.%	62.0		57.8		56.7		49.5		64.0		58.5		68.1		55.8	
Mdn.Ø		63.9		73.2		74.5		66.6		58.1		55.9		65.5		62.5
141.	69	76	72	69	70	77	65	60	65	74	52	76	70	82	58	85
142.	79	50	64	82	73	71	67	65	63	68	53	83	65	86	49	71
143.	59	60	54	90	50	94	49	73	69	73	51	85	70	73	62	83
144.	61	73	60	85	57	94	50	81	69	72	52	63	57	59	51	75
145.	64	83	53	92	52	81	52	85	71	72	53	75	63	64	55	86
146.	49	73	49	83	42	90	48	82	64	77	49	65	58	60	53	77
147.	57	91	54	89	47	85	47	92	64	81	54	64	69	72	54	83
148.	50	78	49	77	50	90	42	82	57	81	47	84	63	73	49	80
149.	53	86	62	94	51	82	48	71	64	85	41	76	45	91	57	88
150.	61	81	51	87	40	77	44	68	59	80	53	85	62	80	40	87
151.	56	76	52	96	44	96	41	84	54	83	42	72	53	85	42	80
152.	52	80	51	89	46	100	42	63	54	85	44	70	50	84	40	77
153.	52	90	52	71	40	93	41	82	46	75	44	82	36	78	45	79
154.	49	86	51	87	37	86	37	77	44	90	42	85	50	83	39	80
155.	35	77	50	90	34	87	37	74	48	89	32	74	48	85	38	82
156.	32	65	32	72	38	69	27	67	53	86	38	76	50	82	40	87

Contd...

Table - 5(b) continued

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
157.	43	82	40	85	31	82	35	74	54	90	40	77	56	83	38	85
158.	49	86	39	78	42	94	36	77	51	90	45	93	51	87	42	89
159.	39	70	46	94	32	84	22	68	37	74	29	66	43	67	31	65
160.	48	76	36	78	29	82	22	72	41	77	39	79	42	82	26	71
Ave.%	53.2		50.8		45.8		43.5		56.7		44.4		55.9		45.6	
Mdn.Ø		78.2		84.5		87.0		75.2		80.7		76.2		81.4		81.8
161.	79	46	82	39	83	42	80	45	75	56	65	40	73	63	69	57
162.	57	38	54	36	69	55	59	65	66	60	56	53	64	47	66	55
163.	68	59	72	53	60	56	64	67	76	64	70	68	79	60	71	64
164.	63	69	55	68	61	63	46	73	63	67	51	71	64	55	59	60
165.	69	71	70	66	72	61	62	59	47	70	33	55	40	64	36	71
166.	41	58	49	63	36	40	38	40	70	70	68	64	71	62	62	83
167.	47	65	42	74	45	73	39	73	60	70	55	40	68	56	43	54
168.	48	66	50	64	44	64	35	39	63	78	60	77	69	64	52	81
169.	61	76	64	63	65	66	49	53	58	55	53	73	69	40	60	44
170.	40	48	49	48	51	64	31	57	58	82	45	84	54	71	38	77
171.	52	63	55	64	51	63	33	54	51	72	59	65	51	64	44	71
172,	32	47	34	73	37	54	20	50	46	70	31	49	37	66	38	77

Contd...

Table - 5(b) Contined

	Form A								Form B							
S.No.	Delhi		U.P.		Raj.		M.P.		Delhi		U.P.		Raj.		M.P.	
	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø	%	Ø
173.	22	41	28	40	17	35	21	47	48	53	21	27	37	57	31	61
174.	35	46	40	40	25	52	23	53	37	76	17	38	35	59	28	60
175.	27	43	31	67	26	49	26	43	50	67	36	50	51	68	37	75
176.	37	47	47	51	33	59	29	48	34	43	33	62	35	66	23	55
Ave.%	48.9		51.2		48.8		41.3		56.5		46.8		56.0		47.4	
Mdn.Ø		49.5		60.9		56.2		52.8		59.5		59.5		61.7		67.2

Table - 6(a)
of
Score Distributions/Samples for Norms

Grade VIII

	Form AV					Form BV				
Scores	Delhi	U.P.	Bihar	Raj.	M.P.	Delhi	U.P.	Bihar	Raj.	M.P.
1-10	1	2	0	0	1	-	-	1	-	-
11-20	3	10	3	0	4	1	7	3	-	4
21-30	23	46	48	25	62	18	31	32	6	30
31-40	80	105	96	84	182	69	67	51	32	100
41-50	142	169	118	121	238	98	78	71	74	202
51-60	194	186	154	145	225	133	79	85	108	149
61-70	221	150	137	167	187	134	79	97	139	167
71-80	193	116	112	145	149	146	63	72	143	141
81-90	130	112	93	893	105	141	52	52	119	76
91-100	101	67	84	49	78	101	52	38	101	70
101-110	60	49	41	42	36	75	25	25	45	36
111-120	34	35	15	22	19	37	27	6	18	26
121-130	12	9	6	2	5	18	10	4	6	9
131-140	3	3	0	2	-	-	-	-	-	1
N	1197	1059	907	893	1291	971	570	537	791	1011

Table - 6(b)

	Form AN					Form BN				
Scores	Delhi	U.P.	Bihar	Raj.	M.P.	Delhi	U.P.	Bihar	Raj.	M.P.
1-4	10	38	19	11	52	17	26	26	10	35
5-8	40	154	63	75	223	70	59	45	54	106
9-12	86	164	85	101	290	96	79	65	75	147
13-16	110	159	101	154	236	113	67	69	96	117
17-20	145	168	136	143	146	137	80	73	101	143
21-24	168	145	122	129	111	140	73	58	123	174
25-28	197	93	146	110	91	145	94	75	104	97
29-32	198	77	124	87	83	130	54	69	87	99
33-37	159	38	77	72	46	81	28	37	94	54
37-40	84	23	34	11	13	42	10	20	47	37
41-44	-	-	-	-	-	-	-	-	-	-
45-48	-	-	-	-	-	-	-	-	-	-
49-52	-	-	-	-	-	-	-	-	-	-
53-56	-	-	-	-	-	-	-	-	-	-
N	1197	1059	907	893	1291	971	570	537	791	1011

Table - 6 (c)

	Form A(V+N)					Form B (V+N)				
Scores	Delhi	U.P.	Bihar	Raj.	M.P.	Delhi	U.P.	Bihar	Raj.	M.P.
1-10	-	-	-	-	-	-	-	-	-	1
11-20	1	4	1	-	1	-	1	1	-	-
21-30	5	11	4	1	16	-	11	12	-	9
31-40	16	55	30	23	76	18	30	21	7	33
41-50	43	72	70	54	133	42	55	41	28	60
51-60	71	132	62	85	188	68	57	46	37	122
61-70	120	148	117	108	224	95	65	63	72	158
71-80	139	144	121	133	137	97	61	61	97	140
81-90	179	121	121	137	168	112	51	77	105	141
91-100	162	99	98	118	96	128	61	77	106	93
101-110	141	81	89	78	82	115	43	37	102	90
111-120	113	64	72	56	58	101	47	29	91	47
121-130	91	49	56	31	46	81	29	32	64	38
131-140	52	39	35	35	38	50	29	21	53	41
141-150	37	19	22	27	15	38	13	13	17	20
151-160	20	15	9	5	12	21	12	6	10	13
161-170	7	5	1	1	1	5	5	-	2	5
171-180	-	1	-	1	-	-	-	-	-	-
N	1197	1059	907	893	1291	971	570	537	791	1011

Table - 7 (a)

Score Distributions of Samples for Norms.

Grade - XI.

	Form AV				Form BV			
Scores	Delhi	U.P.	Raj.	M.P.	Delhi	U.P.	Raj.	M.P.
1-10	1	-	-	-	1	-	-	-
11-20	8	4	2	7	8	4	-	11
21-30	30	49	7	43	22	25	4	52
31-40	41	100	22	93	35	76	15	139
41-50	101	138	61	145	55	143	38	158
51-60	92	179	70	156	66	143	54	137
61-70	82	134	69	133	75	102	102	166
71-80	76	111	47	147	73	75	79	124
81-90	33	91	65	111	52	64	76	116
91-100	22	58	35	70	34	52	41	73
101-110	7	31	28	38	21	17	34	37
111-120	-	-	-	4	2	5	4	11
121-130	-	-	-	-	-	-	-	-
131-140	-	-	-	-	-	-	-	-
N	493	895	404	947	444	706	447	1024

Table - 7(b)

	Form AN				Form BN			
Scores	Delhi	U.P.	Raj.	M.P.	Delhi	U.P.	Raj.	M.P.
1-4	0	14	2	4	-	5	1	14
5-8	7	40	26	39	8	26	15	37
9-12	21	81	53	115	18	64	36	90
13-16	34	68	47	113	38	77	39	105
17-20	54	72	38	111	25	77	38	103
21-24	43	63	43	104	47	72	35	124
25-28	62	68	26	99	42	91	44	130
29-32	57	82	26	69	39	76	29	102
33-36	52	97	30	76	32	58	37	87
37-40	48	90	23	71	48	48	47	78
41-44	42	76	26	53	40	43	50	63
45-48	34	65	26	43	52	41	30	47
49-52	33	62	24	36	33	24	32	31
53-56	6	17	14	14	22	4	14	13
N	493	895	404	947	444	706	447	1024

Table - 7(c)

	Form A(V+N)				Form B (V+N)			
Scores	Delhi	U.P.	Raj.	M.P.	Delhi	U.P.	Raj.	M.P.
1-10	-	-	-	-	-	-	-	-
11-20	-	1	-	1	-	1	-	-
21-30	1	7	3	5	3	2	1	4
31-40	12	34	9	27	9	19	1	35
41-50	16	50	15	55	16	31	11	64
51-60	43	74	24	85	31	74	22	105
61-70	47	92	54	117	32	99	19	104
71-80	80	91	47	109	31	92	46	129
81-90	59	98	38	103	54	78	59	131
91-100	79	106	46	108	68	71	51	99
101-110	48	92	43	112	49	68	61	106
111-120	40	77	39	78	53	49	51	83
121-130	27	84	33	49	33	48	46	62
131-140	29	32	19	38	31	39	29	50
141-150	10	36	19	35	23	22	37	31
151-160	2	21	14	21	9	10	10	15
161-170	-	-	1	4	2	3	2	6
171-180	-	-	-	-	-	-	1	-
N	493	895	404	947	444	706	447	1024

Table 8(a)

Sterata-wise Score Distributions.

Delhi - Grade VIII

	Form AV						Form BV					
Scores	1	2	3	4	Total	Tr. Total	1	2	3	4	Total	Tr. Total
1-10	-	2	-	-	2	1	-	-	-	-	-	-
11-20	-	5	-	-	5	3	-	-	1	-	1	1
21-30	10	22	1	-	33	23	11	-	2	-	13	18
31-40	29	56	13	1	99	80	37	6	10	5	58	69
41-50	86	51	18	7	162	142	43	22	19	5	89	98
51-60	117	39	35	8	199	194	56	34	26	16	132	133
61-70	128	31	47	12	218	221	37	32	50	22	141	134
71-80	106	25	46	5	182	193	50	36	42	29	157	146
81-90	71	6	33	10	120	130	48	27	45	33	153	141
91-100	54	6	27	2	89	101	36	11	34	26	107	101
101-110	22	-	23	1	46	60	18	3	40	10	71	75
111-120	21	-	8	2	31	34	5	3	24	2	34	37
121-130	3	1	5	-	9	12	4	0	11	0	15	18
131-140	1	-	1	-	2	3	-	-	-	-	-	-
TOTAL:	648	244	257	48	1197	1197	345	174	304	148	971	971

Table - 8(b)

	Form AN						Form BN					
Scores	1	2	3	4	Total	Tr. Total	1	2	3	4	Total	Tr. Total
1-4	3	2	3	1	9	10	9	0	4	-	13	17
5-8	14	15	9	8	46	40	31	7	18	2	58	70
9-12	24	40	22	10	96	86	40	15	24	16	95	96
13-16	48	45	23	3	119	110	37	18	40	20	115	113
17-20	76	30	32	8	146	145	47	28	43	18	136	137
21-24	68	42	46	8	164	168	53	30	37	28	148	140
25-28	117	33	40	4	194	197	32	39	61	33	165	145
29-32	129	23	37	4	193	198	52	22	34	19	127	130
33-36	110	11	29	2	152	159	31	13	24	11	79	81
37-40	59	3	16	-	78	84	13	2	19	1	35	42
TOTAL:-	648	244	257	48	1197	1197	345	174	304	148	971	971

Table - 8(c)

	Form A(V+N)						Form B(V+N)					
Scores	1	2	3	4	Total	Tr. Total	1	2	3	4	Total	Tr. Total
1-10	-	-	-	-	-	-	-	-	-	-	-	-
11-20	-	1	-	-	1	1	-	-	-	-	-	-
21-30	1	8	-	-	9	5	-	-	-	-	-	-
31-40	4	12	3	-	19	16	10	1	3	-	14	18
41-50	15	37	5	1	58	43	22	1	9	1	33	42
51-60	29	36	13	6	84	71	32	13	12	3	60	68
61-70	59	45	22	6	132	120	44	15	19	11	89	95
71-80	82	28	26	6	142	139	32	27	26	7	92	97
81-90	103	25	38	10	176	179	34	28	37	28	127	111
91-100	103	31	28	3	165	162	45	32	36	21	134	128
101-110	78	8	36	6	128	141	40	27	33	28	128	115
111-120	68	5	26	6	105	113	33	15	38	22	108	101
121-130	41	5	29	2	77	91	24	10	33	18	85	81
131-140	30	2	13	1	46	52	13	2	25	8	48	50
141-150	21	-	10	1	32	37	11	2	18	1	32	38
151-160	12	1	5	-	18	20	5	1	11	-	17	21
161-170	2	-	3	-	5	7	-	-	4	-	4	6
171-180	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL:	648	244	257	48	1197	1197	345	174	304	148	971	971

Table - 9(a)

Strata-wise Score Distribution
u.p.- Grade VIII

	Form AV						Form BV					
Scores	1	2	3	4	Total	Tr. Total	1	2	3	4	Total	Tr. Total
1-10	1	0	0	1	2	2	0	0	0		0	0
11-20	1	7	0	0	8	10	6	1	0		7	7
21-30	9	22	11	2	44	46	16	17	-		33	31
31-40	17	55	22	19	113	105	34	37	-		71	67
41-50	38	78	34	13	168	169	34	49	-		83	78
51-60	47	77	39	32	195	186	27	54	2		83	79
61-70	34	68	32	15	149	150	33	48	2		83	79
71-80	34	41	26	18	119	116	24	33	6		63	63
81-90	30	43	26	11	110	112	17	30	5		52	52
91-100	17	25	20	4	66	67	14	20	13		47	52
101-110	17	11	17	2	47	49	6	4	10		20	25
111-120	10	12	10	1	33	35	4	1	15		20	27
121-130	4	2	2	-	8	9	3	-	5		8	10
131-140	2	-	-	-	2	3	-	-	-		-	-
TOTAL:	261	441	239	118	1059	1059	218	294	58		570	570

Table - 9(b)

	Form AN						Form BN				
Scores	1	2	3	4	Total	Tr. Total	1	2	3	Total	Tr. Total
1-4	4	21	11	10	46	38	6	20	1	27	26
5-8	31	64	51	10	156	154	20	42	-	62	59
9-12	32	75	44	15	166	164	29	55	-	84	79
13-16	41	65	34	21	161	159	24	47	-	71	67
17-20	84	63	36	22	169	168	33	45	4	82	80
21-24	50	45	28	18	141	145	30	36	7	73	73
25-28	19	42	23	18	102	93	48	27	16	91	94
29-32	20	36	9	2	67	77	19	19	12	50	54
33-36	9	19	3	2	33	38	9	2	12	23	28
37-40	7	11	-	-	18	23	-	1	6	7	10
TOTAL:	261	441	239	118	1059	1059	218	294	58	570	570

Table - 9(c)

	Form A(V+N)						Form B(V+N)					
Scores	1	2	3	4	Total	Tr. Total	1	2	3	4	Total	Tr. Total
1-10	-	-	-	1	1	-	-	-	-	-		-
11-20	1	2	-	-	3	4	1	-	-	1		1
21-30	1	5	3	2	11	11	7	4	-	11		11
31-40	7	33	10	2	52	55	10	22	-	32		30
41-50	13	37	14	12	76	72	27	31	-	58		55
51-60	26	60	35	15	136	132	24	37	-	61		57
61-70	38	53	43	21	155	148	21	48	-	69		65
71-80	38	65	18	14	135	144	26	39	-	65		61
81-90	29	50	30	16	125	121	23	28	2	53		51
91-100	29	36	21	18	104	99	28	31	4	63		61
101-110	21	34	16	6	77	81	15	23	5	43		43
111-120	20	23	12	6	61	64	17	17	10	44		47
121-130	13	20	11	2	46	49	7	9	9	25		29
131-140	9	10	22	2	43	39	5	5	13	23		29
141-150	8	5	3	-	16	19	4	-	6	10		13
151-160	4	7	1	1	13	15	3	-	6	9		12
161-170	3	1	-	-	4	6	-	-	3	3		5
171-180	1	-	-	-	1	1	-	-	-	-		-
TOTAL:	261	441	239	1189	1059	1059	218	294	58	570		570

Table - 10(a)

Strata-wise score Distribution

Bihar Grade - VIII

	Form AV					Form BV				
Scores	1	2	4	Total	Tr. Total	1	2	3	Total	Tr. Total
1-10	0	0	0	0	-	0	1	0	1	1
11-20	3	1	0	4	3	0	2	1	3	3
21-30	19	28	0	47	48	3	24	3	30	32
31-40	29	59	2	90	96	8	36	10	54	51
41-50	43	69	1	113	118	21	43	12	76	71
51-60	55	87	7	149	154	21	54	14	89	85
61-70	54	76	5	135	137	27	60	8	95	97
71-80	41	59	11	111	112	19	46	2	67	72
81-90	38	50	6	94	93	12	34	4	50	52
91-100	41	38	12	91	84	13	22	5	40	38
101-110	24	18	4	46	41	6	16	1	23	25
111-120	12	6	1	19	15	0	5	0	5	6
121-130	5	1	2	8	6	1	3	0	4	4
131-140	-	-	-	-	-	-	0	0	0	-
TOTAL:	364	492	51	907	907	131	346	60	537	537

Table - 10 (b)

	Form AN					Form BN				
Scores	1	2	4	Total	Tr. Total	1	2	3	Total	Tr. Total
1-4	6	11	1	18	19	0	20	13	33	26
5-8	45	29	0	74	63	7	30	27	64	45
9-12	37	44	6	88	85	12	44	16	72	65
13-16	60	50	2	112	101	17	45	1	63	69
17-20	56	71	11	138	136	27	41	1	69	73
21-24	53	65	6	124	122	26	29	0	55	58
25-28	34	88	9	131	146	23	45	1	69	75
29-32	34	71	11	106	124	16	46	0	62	69
33-36	26	45	2	73	77	3	29	1	33	37
37-40	13	18	3	34	34	0	17	0	17	20
TOTAL:	364	492	51	907	907	131	346	60	537	537

Table - 10(c)

	Form A(V+N)					Form B (V+N)				
Scores	1	2	4	Total	Tr. Total	1	2	3	Total	Tr. Total
1-10	0	0	0	0	-	0	0	0	0	-
11-20	1	0	0	1	1	0	1	0	1	1
21-30	3	2	0	5	4	0	10	2	12	12
31-40	18	15	1	32	30	3	15	3	21	21
41-50	25	41	1	67	70	9	26	14	49	41
51-60	32	33	0	65	62	9	31	11	51	46
61-70	36	70	3	109	117	14	41	10	65	63
71-80	38	71	5	114	121	19	36	9	64	61
81-90	52	66	4	122	121	25	46	2	73	77
91-100	38	52	9	99	98	14	54	5	73	77
101-110	35	47	7	89	89	13	21	2	36	37
111-120	30	38	5	73	72	8	18	1	27	29
121-130	20	27	9	56	55	10	19	1	30	32
131-140	14	18	4	36	35	6	13	0	19	21
141-150	17	9	1	27	22	0	11	0	11	13
151-160	7	3	1	11	9	1	4	0	5	6
161-170	0	0	1	1	1	-	-	-	-	-
171-180	-	-	-	-	-	-	-	-	-	-
TOTAL:	364	492	51	907	907	131	346	60	537	537

Table - 11(a)

Strata-wise Score Distributions
Rajasthan - Grade VIII

	Form AV					Form BV					
Scores	1	2	3	Total	Tr. Total	1	2	3	4	Total	Tr. Total
1-10	0	0	0	0	0	0	0	0	0	0	0
11-20	0	0	0	0	0	0	0	0	0	0	0
21-30	6	13	2	21	25	3	2	1	0	6	6
31-40	23	39	16	78	84	10	12	7	0	29	32
41-50	34	54	30	118	121	26	30	7	4	67	74
51-60	47	61	35	143	145	50	37	11	6	104	108
61-70	75	62	23	160	167	47	56	17	7	127	139
71-80	61	51	36	148	145	70	44	20	12	146	143
81-90	50	23	23	96	89	61	35	17	12	125	119
91-100	25	15	10	50	49	33	42	10	12	97	101
101-110	29	9	7	45	42	23	10	12	7	52	45
111-120	13	3	12	28	22	13	1	6	8	28	18
121-130	1	0	2	3	2	3	0	5	2	10	6
131-140	2	0	1	3	2	0	0	0	0	0	0
TOTAL:	366	330	197	893	893	339	269	113	70	791	791

Table - 11 (b)

	Form AN					Form BN					
Scores	1	2	3	Total	Tr.Total	1	2	3	4	Total	Tr.Total
1-4	6	3	2	11	11	1	6	0	0	7	10
5-8	36	29	3	68	75	21	19	9	3	52	54
9-12	29	48	15	92	101	26	28	13	5	72	75
13-16	48	68	30	146	154	37	32	19	8	96	96
17-20	55	52	41	148	143	37	31	29	8	105	101
21-24	38	55	35	128	129	45	45	20	11	121	123
25-28	55	30	36	121	110	50	30	19	9	108	104
29-32	47	25	22	94	87	47	29	3	13	92	87
33-36	43	19	13	75	72	50	33	0	7	90	94
37-40	9	1	0	10	11	25	16	1	6	48	47
TOTAL:	366	330	197	893	893	339	269	113	70	791	791

Table - 11(c)

	Form A(V+N)					Form B(V+N)					
Scores	1	2	3	Total	Tr. Total	1	2	3	4	Total	Tr. Total
1-10	0	0	0	0	0	0	0	0	0	0	0
11-20	0	0	0	0	0	0	0	0	0	0	0
21-30	1	0	0	1	1	0	0	0	0	0	0
31-40	7	11	2	20	23	1	3	2	0	6	7
41-50	19	24	6	49	54	13	9	4	0	26	28
51-60	26	36	23	85	85	12	15	5	1	33	37
61-70	22	54	25	101	108	24	30	7	7	68	72
71-80	44	56	27	127	133	32	38	16	5	91	97
81-90	60	50	24	134	137	47	36	13	5	101	105
91-100	52	40	30	122	118	50	33	16	9	108	106
101-110	43	22	16	81	78	50	30	16	12	108	102
111-120	32	14	15	61	56	44	29	11	9	93	91
121-130	16	9	9	34	31	27	24	5	4	60	64
131-140	20	9	8	37	35	19	18	11	9	57	53
141-150	20	4	7	31	27	10	4	3	5	22	17
151-160	2	1	4	7	5	8	0	4	4	16	10
161-170	1	0	1	2	1	2	0	0	0	2	2
171-180	1	0	0	1	1	0	0	0	0	0	0
TOTAL:	366	330	197	893	893	339	269	113	70	791	791

Table 12 (a)

Strata Wise Score Distributions

M.P. Grade VIII

	Form AV						Form BV			
Scores	1	2	3	4	Total	Tr.Total	1	2	Total	Tr.Total
1-10	0	0	1	0	1	1	0	0	0	0
11-20	5	0	1	0	6	4	8	1	8	4
21-30	35	12	9	6	62	62	39	3	42	30
31-40	78	33	58	18	187	182	85	19	104	100
41-50	105	52	44	22	223	238	122	48	170	202
51-60	121	44	42	8	215	225	147	24	171	149
61-70	105	31	51	4	191	187	114	37	151	167
71-80	92	25	32	2	151	149	87	33	120	141
81-90	62	17	27	3	109	105	86	10	96	76
91-100	51	16	5	-	72	78	50	15	65	70
101-110	36	3	6	0	45	36	35	6	41	36
111-120	22	1	2	0	25	19	26	4	30	26
121-130	3	1	0	0	4	5	11	1	12	9
131-140	0	0	0	0	0	0	1	0	1	1
Total	715	235	278	63	1291	1291	811	200	1011	[illegible]

Table 12 (b)

	Form AN						Form BN			
Scores	1	2	3	4	Total	Tr.Total	1	2	Total	Tr.Total
1-4	32	9	8	14	63	52	47	3	50	35
5-8	120	43	39	31	233	223	119	15	134	108
9-12	130	60	65	14	269	290	138	25	163	147
13-16	103	52	46	4	205	236	105	21	126	117
17-20	82	21	51	0	154	146	81	35	116	143
21-24	75	15	31	0	121	111	81	46	127	174
25-28	56	14	24	0	94	91	69	21	90	97
29-30	58	14	11	0	83	83	63	23	86	99
33-36	43	6	3	0	52	46	66	6	72	54
37-40	16	1	0	0	17	13	42	5	47	37
Total	715	235	278	63	1291	1291	811	200	1011	1011

Table 12 (c)

	Form A(V+F)						Form B(V+F)			
Scores	1	2	3	4	Total	Tr.Total	1	2	Total	Tr.Total
1-10	0	0	0	0	0	0	1	0	1	1
11-20	0	0	1	0	1	1	0	0	0	0
21-30	8	4	1	1	14	16	16	0	16	9
31-40	42	13	18	9	82	76	40	4	44	33
41-50	65	23	38	20	146	1[illegible]3	58	10	68	60
51-60	76	42	37	19	174	188	103	23	126	122
61-70	109	47	41	8	205	224	98	37	135	158
71-80	84	21	37	2	144	137	105	29	134	140
81-90	82	33	39	1	155	168	98	31	129	141
91-100	[illegible]	[illegible]	[illegible]	[illegible]	107	[illegible]	82	17	99	93
101-110	54	12	21	0	87	82	57	21	78	90
111-120	35	10	12	0	57	58	44	8	52	47
121-130	32	9	2	0	43	46	38	6	44	38
131-40	34	5	3	0	42	38	23	10	33	41
141-150	16	1	3	0	20	15	26	2	28	20
151-160	11	2	0	0	13	2	13	2	15	13
161-170	1	0	0	0	1	1	9	0	9	5
171-180	0	0	0	0	0	0	0	0	0	0
Total	715	235	278	63	1291	1291	811	200	1011	1011

Table 13 (a)

Strata-wise Score Distributions

Delhi - Grade IX

	Form AV					Form BV				
Scores	1	2	3	Total	Tr.Total	1	2	3	Total	Tr. Total
1-10	0	1	0	1	1	1	0	-	1	1
11-20	3	7	0	10	8	6	0	-	6	8
21-30	25	11	1	37	30	15	1	3	19	22
31-40	38	7	3	48	41	20	8	4	32	35
41-50	67	17	18	102	101	30	11	11	52	55
51-60	54	12	21	87	92	24	21	24	69	66
61-70	44	8	21	73	82	28	14	35	77	75
71-80	57	4	15	76	76	28	7	38	73	73
81-90	28	2	5	35	32	18	5	30	53	52
91-100	13	0	6	19	22	6	0	31	37	34
101-110	3	0	2	5	7	5	1	16	22	21
111-120	0	0	0	0	0	0	0	3	3	2
Total	301	69	93	493	493	181	68	195	444	444

Table 13 (b)

	Form AN					Form BN				
Scores	1	2	3	Total	Tr.Total	1	2	3	Total	Tr. Total
1-4	0	0	0	0	0	0	0	0	0	0
5-8	4	0	2	6	7	4	0	3	7	8
9-12	20	2	2	24	21	10	2	5	17	18
13-16	20	4	8	32	34	20	3	13	36	38
17-20	33	6	12	51	54	11	3	11	35	25
21-24	32	11	5	48	43	18	9	21	48	47
25-28	28	11	16	55	62	14	12	18	44	42
29-32	28	15	12	55	57	13	4	23	40	39
33-36	34	8	10	52	52	11	8	14	33	33
37-40	31	3	11	45	48	17	10	23	50	48
41-44	32	5	7	44	42	11	6	25	42	40
45-48	30	1	5	36	34	26	6	17	49	52
49-52	33	2	3	38	33	13	3	17	33	33
53-56	6	1	0	7	6	13	2	5	20	22
Total	331	69	93	493	493	181	68	195	444	444

Table 13 (c)

	Form A(V+V)					Form B(V+M)				
Scores	1	2	3	Total	Tr.Total	1	2	3	Total	Tr.Total
1-10	0	0	0	0	0	0	0	0	0	0
11-20	0	0	0	0	0	0	0	0	0	0
21-30	1	0	0	1	1	2	0	0	2	3
31-40	14	2	0	16	12	6	0	2	8	9
41-50	16	5	0	21	16	11	1	2	14	16
51-60	22	18	6	46	43	18	4	6	28	31
61-70	30	12	7	49	47	15	8	9	32	32
71-80	44	11	19	74	80	12	11	9	32	31
81-90	45	6	10	61	59	27	5	19	51	54
91-100	47	7	19	73	79	23	20	28	71	68
101-110	23	6	13	42	48	20	9	20	49	49
111-120	39	0	5	44	40	17	3	34	54	53
121-130	25	2	3	30	27	13	3	17	33	30
131-140	19	0	7	26	29	9	2	22	33	31
141-150	3	0	4	7	10	6	2	17	25	23
151-160	3	0	0	3	2	2	0	8	10	9
161-170	0	0	0	0	0	0	0	2	2	2
Total	331	69	93	493	493	181	68	196	444	444

Table 11 (a)

Strata-wise Score distribution

U.P.-Grade - XI

	Form AV					Form BV				
Scores	1	2	3	Total	Tr.Total	1	2	3	Total	Tr.Total
1-10	0	0	0	0	0	0	0	0	0	0
11-20	0	2	4	6	44	0	6	0	6	4
21-30	3	44	19	66	49	2	31	0	33	35
31-40	7	100	26	133	160	13	75	2	90	76
41-50	15	136	19	170	138	41	106	1	148	143
51-60	33	134	17	184	179	44	90	6	140	143
61-70	29	89	9	127	134	28	66	8	102	102
71-80	31	49	6	86	111	21	47	6	74	75
81-90	28	35	1	64	91	23	28	6	57	64
91-100	18	23	0	41	58	21	7	11	39	58
101-110	11	7	0	18	31	7	3	3	13	17
111-120	-	-	-	-	-	1	1	2	4	5
Total	175	619	101	895	896	201	460	45	706	706

Table 14 (b)

	Form AN					Form BN				
Scores	1	2	3	Total	Tr.Total	1	2	3	Total	Tr.Total
1-4	2	6	8	16	14	0	5	0	5	3
5-8	3	25	24	52	40	0	25	1	26	19
9-12	5	69	36	110	81	8	48	8	64	56
13-16	5	62	22	89	68	15	56	6	77	71
17-20	11	64	5	80	72	23	46	8	77	79
21-24	11	53	3	67	63	24	42	6	72	76
25-28	15	46	2	63	68	18	68	5	91	83
29-32	22	43	1	66	82	15	56	5	76	70
33-36	18	82	0	100	97	19	37	2	58	60
37-40	22	57	0	79	90	12	34	2	48	46
41-44	20	43	0	63	76	21	20	2	43	51
45-48	18	33	0	51	65	28	13	0	41	55
49-52	18	28	0	46	62	14	10	0	24	30
53-56	5	8	0	13	17	4	0	0	4	7
Total	175	619	101	895	89	201	460	45	706	706

Table 14 (c)

Scores	Form A(V+F) 1	2	3	Total	Tr.Total	Form B (V+N) 1	2	3	Total	Tr.Total
1-10	0	0	0	0	0	0	0	0	0	0
11-20	0	1	1	2	1	0	1	0	1	1
21-30	0	4	7	11	7	0	3	0	3	2
31-40	1	31	16	48	34	1	25	0	26	19
41-50	2	46	23	71	50	2	37	1	40	31
51-60	7	67	20	94	74	17	61	3	81	74
61-70	12	81	15	108	92	29	70	2	101	99
71-80	13	81	9	103	91	24	68	4	96	92
81-90	19	74	5	98	98	22	50	6	78	78
91-100	21	81	3	105	106	19	47	6	72	71
101.110	23	55	1	79	92	21	34	8	63	68
111-120	22	36	1	59	77	14	28	5	47	49
121-130	27	29	0	56	84	16	23	5	44	48
131-140	10	12	0	22	32	19	7	2	28	30
141-150	10	18	0	28	36	10	5	2	17	22
151-160	8	3	0	11	21	5	1	1	7	10
161-170	0	0	0	0	0	2	0	0	2	3
Total	175	619	101	895	895	201	460	45	706	706

Table 15 (a)

Strata-wise Score Distributions

Rajasthan - Grade XI

	Form A					Form B					
Scores	1	2	3	Total	Tr.Total	1	2	3	4	Total	Tr.Total
1-10	0	0	0	0	0	0	0	0	0	0	0
11-20	0	1	1	2	2	0	0	0	0	0	0
21-30	1	0	6	7	7	1	0	4	0	5	4
31-40	9	3	9	21	22	6	1	8	0	15	15
41-50	33	18	10	61	61	13	8	13	3	37	38
51-60	40	21	9	70	70	17	9	31	1	58	64
61-70	39	23	7	69	69	38	19	25	8	90	102
71-80	24	22	4	50	47	27	19	20	8	74	79
81-90	37	22	6	65	65	26	18	21	11	76	76
91-100	19	12	4	35	36	14	8	15	8	45	41
101-110	19	4	1	24	26	10	12	6	10	38	34
111-120	0	0	0	0	0	1	0	2	6	9	4
Total	221	126	57	404	404	153	94	145	55	447	447

Table 15 (b)

	Form AN					Form BN					
Scores	1	2	3	Total	Tr.Total	1	2	3	4	Total	Tr.Total
1-4	2	0	0	2	2	0	0	1	0	1	1
5-8	9	2	14	25	26	4	3	10	3	20	15
9-12	28	14	11	53	53	14	2	17	6	39	36
13-16	20	21	9	50	47	12	12	11	1	36	39
17-20	17	19	5	41	38	11	10	17	2	40	38
21-24	17	21	9	47	43	9	11	16	3	39	36
25-28	15	9	2	26	26	19	10	26	4	59	44
29-32	11	11	5	27	26	11	4	11	3	29	29
33-36	17	12	2	31	30	14	8	6	4	32	37
37-40	15	7	0	22	23	16	13	8	6	43	47
41-44	19	5	0	24	26	21	9	3	7	40	50
45-48	21	2	0	23	26	11	6	7	3	27	30
49-52	19	2	0	21	24	12	3	9	8	33	32
53-56	11	1	0	12	14	5	3	3	5	16	14
Total	221	126	57	404	404	153	94	145	55	47	447

Table 15 (c)

	Form A(V+N)					Form B(V+N)					
Scores	1	2	3	Total	Tr.Total	1	2	3	4	Total	Tr.Total
1-10	0	0	0	0	0	0	0	0	0	0	0
11-20	0	0	0	0	0	0	0	0	0	0	0
21-30	1	0	2	3	3	0	0	1	0	1	1
31-40	2	1	6	9	9	0	0	3	0	3	1
41-50	5	2	8	15	15	4	0	9	0	13	11
51-60	12	6	6	24	24	9	1	9	3	22	[illegible]
61-70	31	15	7	53	54	5	6	9	2	22	14
71-80	24	15	9	48	47	15	10	18	2	45	46
81-90	18	21	2	41	38	20	12	22	3	57	59
91-100	23	19	6	48	46	15	14	20	6	55	51
101-110	24	15	4	43	43	21	15	15	5	56	61
111-120	22	14	3	39	39	19	10	11	7	47	51
121-130	19	11	3	33	30	19	7	8	4	38	46
131-140	14	2	1	17	19	10	6	9	7	32	29
141-150	14	3	0	17	19	13	10	6	5	34	37
151-160	11	2	0	13	14	3	2	4	4	13	10
161-170	1	0	0	1	1	0	1	1	5	7	2
171-180	-	-	-	-	-	0	0	0	2	2	1
Total	221	126	57	404	404	153	94	145	55	447	447

Table 16 (a)

Strata-wise Score Distributions

[illegible] - Grade XI

	Form AV						Form BV					
Scores	1	2	3	4	Total	Tr. Total	1	2	3	4	Total	Tr. Total
1-10	-	-	-	-	-	-	-	-	-	-	-	-
11-20	4	1	1	-	6	7	8	2	1	-	11	11
21-30	18	22	2	-	42	43	31	15	2	-	48	52
31-40	51	48	-	1	100	90	69	33	16	5	122	130
41-50	71	70	4	3	148	145	83	45	9	17	154	158
51-60	93	61	4	4	162	156	87	30	10	14	141	137
61-70	73	60	3	1	137	133	114	31	14	6	165	186
71-80	83	42	11	2	138	147	102	20	6	11	139	134
81-90	71	23	9	3	106	111	75	36	-	1	112	116
91-100	52	14	4	-	70	70	60	11	5	2	78	73
101-110	26	4	4	-	34	38	34	3	3	1	41	37
111-120	5	-	-	-	5	4	9	1	1	1	12	11
Total	547	345	42	13	947	947	672	227	67	58	1024	1024

Table 16 (b)

	Form AN						Form BN					
Scores	1	2	3	4	Total	Tr. Total	1	2	3	4	Total	Tr. Total
1-4	-	4	-	-	4	4	2	3	4	-	9	14
5-8	17	18	2	1	38	39	25	4	6	1	36	27
9-12	54	46	8	-	108	115	56	12	13	5	87	90
13-16	54	51	5	1	111	113	71	22	6	9	109	106
17-20	67	46	2	2	117	111	70	21	6	18	115	103
21-24	59	44	3	-	106	104	90	25	6	13	134	134
25-28	54	40	3	5	102	99	65	38	9	5	117	130
29-32	31	25	5	3	64	69	69	23	6	3	101	102
33-36	44	20	6	1	71	76	41	29	4	1	75	87
37-40	58	13	3	-	74	71	55	18	3	3	79	78
41-44	42	14	1	-	57	53	59	9	2	-	70	63
45-48	30	14	1	-	45	43	37	9	2	-	48	47
49-52	27	7	2	-	36	36	21	9	-	-	30	31
53-56	10	3	1	-	14	14	11	3	-	-	14	13
Total	547	345	42	13	947	947	672	227	67	58	1024	1024

Table 16 (c)

Scores	A-Total Form A(V-C) 1	2	3	4	Total	Tr. Total	B-Total Form B(V-B) 1	2	3	4	Total	Tr.Total
1-10	-	-	-	-	-	-	-	-	-	-	-	-
11-20	-	1	-	-	1	1	-	-	-	-	-	-
21-30	1	1	1	-	3	5	3	-	1	-	4	4
31-40	13	16	-	-	29	27	20	6	5	-	31	36
41-50	25	28	2	-	55	55	35	12	9	2	58	64
51-60	51	41	-	-	92	85	59	26	8	8	101	106
61-70	62	52	3	3	120	117	65	26	5	12	108	104
71-80	52	56	2	3	113	109	64	37	9	12	122	129
81-90	49	38	7	3	97	103	74	33	10	8	125	131
91-100	63	33	7	1	104	108	73	16	8	10	107	99
101-110	63	33	8	2	106	112	87	23	1	2	113	106
111-120	55	16	5	1	77	78	61	20	2	-	83	83
121-130	35	10	3	-	48	49	50	12	2	1	65	62
131-140	31	11	-	-	42	38	34	9	5	1	49	50
141-150	29	7	1	-	37	35	26	4	2	2	34	31
151-160	13	2	3	-	18	21	15	2	-	-	17	15
161-170	5	-	-	-	5	4	6	1	-	-	7	6
171-180	-	-	-	-	-	-	-	-	-	-	-	-
Total	547	345	42	13	947	947	672	227	67	58	1024	1024

Table 17 (a)

Means, Standard Deviations and Reliability Co-efficients'
of various subtests - Grade VIII (N = 200 in each case)

NAME OF THE TEST		NO. OF ITEMS	DELHI			Uttar Pradesh			Rajasthan			Madhya Pradesh		
			M	SD	r	M	SD	r	M	SD	r	M	SD	r
1		2	3	4	5	6	7	8	9	10	11	12	13	14
Synonymes	A	29	17.27	6.27	.80	16.13	6.38	.87	15.08	5.52	.81	14.91	5.76	.83
	B		16.58	6.04	.85	16.30	6.44	.87	15.48	5.38	.80	15.22	6.83	.39
Classification	A	17	8.47	3.26	.66	8.53	3.67	.75	8.32	3.49	.72	7.85	3.46	.71
	B		9.66	3.21	.67	8.84	3.41	.73	9.22	2.93	.59	7.85	3.56	.73
Analogy	A	20	9.76	4.16	.77	10.32	4.99	.85	10.10	4.23	.78	7.61	4.54	.77
	B		10.44	4.43	.80	9.66	4.33	.78	10.61	3.90	.73	7.81	4.23	.78
Reading Comprehension	A	19	7.31	3.14	.60	7.08	3.41	.67	7.40	2.89	.52	6.00	3.83	.60
	B		7.94	3.36	.66	6.70	3.86	.76	7.56	3.18	.68	6.61	3.74	.75
Antonyms	A	18	9.97	4.09	.79	8.68	4.49	.83	7.31	3.86	.76	7.43	4.88	.79
	B		8.86	4.14	.79	8.69	4.31	.81	8.68	3.67	.72	7.64	4.53	.84
Similarities	A	16	[illegible]	3.28	.70	6.58	3.34	.71	7.16	2.91	.59	5.29	2.94	.65
	B		7.63	3.37	.74	6.86	2.70	.79	7.87	2.90	.60	6.49	2.59	.77

1. By formula [illegible]

Contd---

Table 17(a) Contd.

1		2	3	4	5	6	7	8	9	10	11	12	13	14
Sentence Completion	A	21	9.51	5.08	.84	8.83	4.94	.84	9.64	4.76	.82	8.17	5.12	.86
	B		11.26	5.10	.85	10.18*	5.31	.86	11.14	4.72	.82	9.42	5.40	.87
V Form	A	140	69.19	20.87	-	66.12	24.69	-	65.01	20.49	-	57.26	22.45	-
	B		72.27	23.15	-	67.23	25.76	-	70.56	19.39	-	61.04	24.63	-
Arithmetic	A	20	13.07	3.75	.75	10.50	4.55	.83	10.65	3.64	.72	9.34	4.15	.77
	B		11.88	4.19	.81	10.31*	4.35	.80	10.95	3.85	.74	11.08	4.50	.83
Number Series	A	20	11.62	5.76	.90	8.51	5.97	.92	8.81	6.75	.92	5.95	5.29	.91
	B		10.39	6.51	.93	9.95*	6.14	.92	10.13	6.14	.92	7.27	6.17	.93
N Form	A	40	24.69	8.21	-	19.01	8.85	-	19.46	8.25	-	15.29	8.18	-
	B		22.87	9.20	-	20.26*	9.44	-	21.08	8.71	-	18.35	9.52	-
(V + N)	A	180	93.88	25.98	-	85.13	30.95	-	84.47	25.82	-	72.55	28.15	-
	B		94.54	29.15	-	87.49	32.72	-	91.64	24.41	-	79.39	30.78	-

1. By formula KR - 20

* N = 190.

Table 17 (b)

Means, Standard deviations and reliability Co-efficients' of various sub-tests grade -XI (N = 200 in each case)

Name of the Test		No. of Items	Delhi			Uttar Pradesh			Rajasthan			Madhya Pradesh		
			M	SD	r	M	SD	r	M	SD	r	M	SD	r
1		2	3	4	5	6	7	8	9	10	11	12	13	14
Synonyms	A	24	11.21	4.50	.76	13.24	5.16	.83	13.58	5.22	.82	13.45	4.82	.79
	B		11.95	5.57	.85	12.29	5.16	.82	13.45	4.45	.76	13.42	5.47	.85
Analogy	A	16	8.34	3.37	.71	8.70	3.66	.77	9.60	3.62	.77	7.84	3.71	.78
	B		9.78	3.27	.71	7.81	3.09	.65	9.57	3.28	.70	8.19	3.54	.74
Reading Comprehension	A	22	10.55	4.47	.78	9.88	4.33	.76	12.05	4.28	.74	10.07	4.70	.81
	B		11.69	4.81	.81	11.92	4.23	.76	13.01	4.19	.75	10.39	4.32	.76
Antonyms	A	24	11.31	4.97	.80	12.87	5.10	.85	14.03	4.77	.79	13.23	5.03	.83
	B		12.95	5.51	.85	12.80	5.15	.82	15.27	4.34	.76	12.83	5.55	.85
Sentence Completion	A	20	9.72	4.20	.77	10.46	4.14	.76	11.20	4.44	.80	10.02	4.46	.80
	B		11.09	4.41	.81	9.50	4.48	.81	12.69	3.65	.72	10.20	4.58	.85

' By formula KR-20

Table 17 (b) Contd.

1		2	3	4	5	6	7	8	9	10	11	12	13	14
Classification.	A	14	6.76	4.09	.86	7.50	4.04	.86	8.13	3.76	.83	7.16	4.04	.86
	B		7.95	3.86	.85	7.34	3.86	.84	9.70	3.45	.83	7.86	4.04	.87
V Form	A	120	57.89	19.13	-	62.65	19.84	-	69.34	19.11	-	61.77	21.38	-
	B		65.41	23.83	-	61.66	22.71	-	73.69	17.75	-	62.89	27.67	-
Mathematical Reasoning.	A	20	12.40	4.67	.84	11.55	5.58	.90	11.34	5.74	.90	9.89	5.32	.88
	B		12.80	4.50	.83	11.71	4.42	.81	11.62	5.28	.88	11.15	4.92	.86
Number series.	A	20	10.64	6.17	.92	10.16	6.68	.94	9.01	6.66	.94	8.70	5.86	.91
	B		11.35	6.52	.94	8.88	6.22	.92	11.18	6.22	.92	9.14	6.24	.92
Data Sufficiency.	A	16	7.83	3.43	.74	8.19	3.78	.79	7.81	3.58	.79	6.60	3.40	.75
	B		9.05	4.14	.84	7.48	3.84	.81	8.96	3.71	.79	7.59	3.95	.82

Contd.

Table 17(b) Contd.

1		2	3	4	5	6	7	8	9	10	11	12	13	14
N Form	A	56	30.87	11.78	-	29.90	14.03	-	28.16	14.48	-	25.19	12.09	-
	F	. .	33.20	13.66	-	28.07	12.48	-	31.76	13.13	-	27.88	14.16	-
(V + N)	A	173	88.76	26.40	-	92.55	29.72	-	97.50	29.74	-	86.96	30.01	-
	B		98.61	33.08	-	89.73	31.76	-	105.45	26.68	-	90.77	38.20	-

Table 18 (a)

Comparisons of Means and Standard Deviations of Total Samples for Norms and Selected Random Samples.

Grade VIII

Variable			Delhi			Uttar Pradesh			Rajasthan			Madhya Pradesh		
V	A	SS*	69.19	20.87	200	66.12	24.69	200	65.01	20.49	200	57.26	22.45	200
		TS	69.08	20.41	1197	64.07	24.12	1059	65.90	21.47	893	60.41	22.31	1291
	B	SS	72.27	23.15	200	67.23	25.76	200	70.56	19.39	200	61.14	24.63	200
		TS	72.82	21.83	971	65.40	25.96	570	72.76	20.20	791	63.47	22.41	1011
N	A	SS	24.69	8.21	200	19.01	8.85	200	19.46	8.25	200	15.29	8.18	200
		TS	24.02	9.78	1197	17.47	9.66	1059	19.97	8.66	893	15.72	8.60	1291
	B	SS	22.87	9.20	200	20.26	9.43	200	21.08	8.71	200	18.35	9.52	200
		TS	21.66	9.13	971	19.05	9.12	570	22.32	9.35	791	19.26	9.27	1011
V + N	A	SS	93.88	25.98	200	85.13	30.95	200	84.47	25.82	200	72.55	28.15	200
		TS	93.39	25.94	1197	81.40	29.93	1059	85.67	26.93	893	76.62	26.87	1291
	B	SS	94.54	20.15	200	87.49	32.71	200	91.64	24.41	200	79.39	30.78	200
		TS	94.88	26.91	971	84.05	32.78	570	95.03	26.25	791	82.36	28.40	1011

SS for selected sample

TS for total sample.

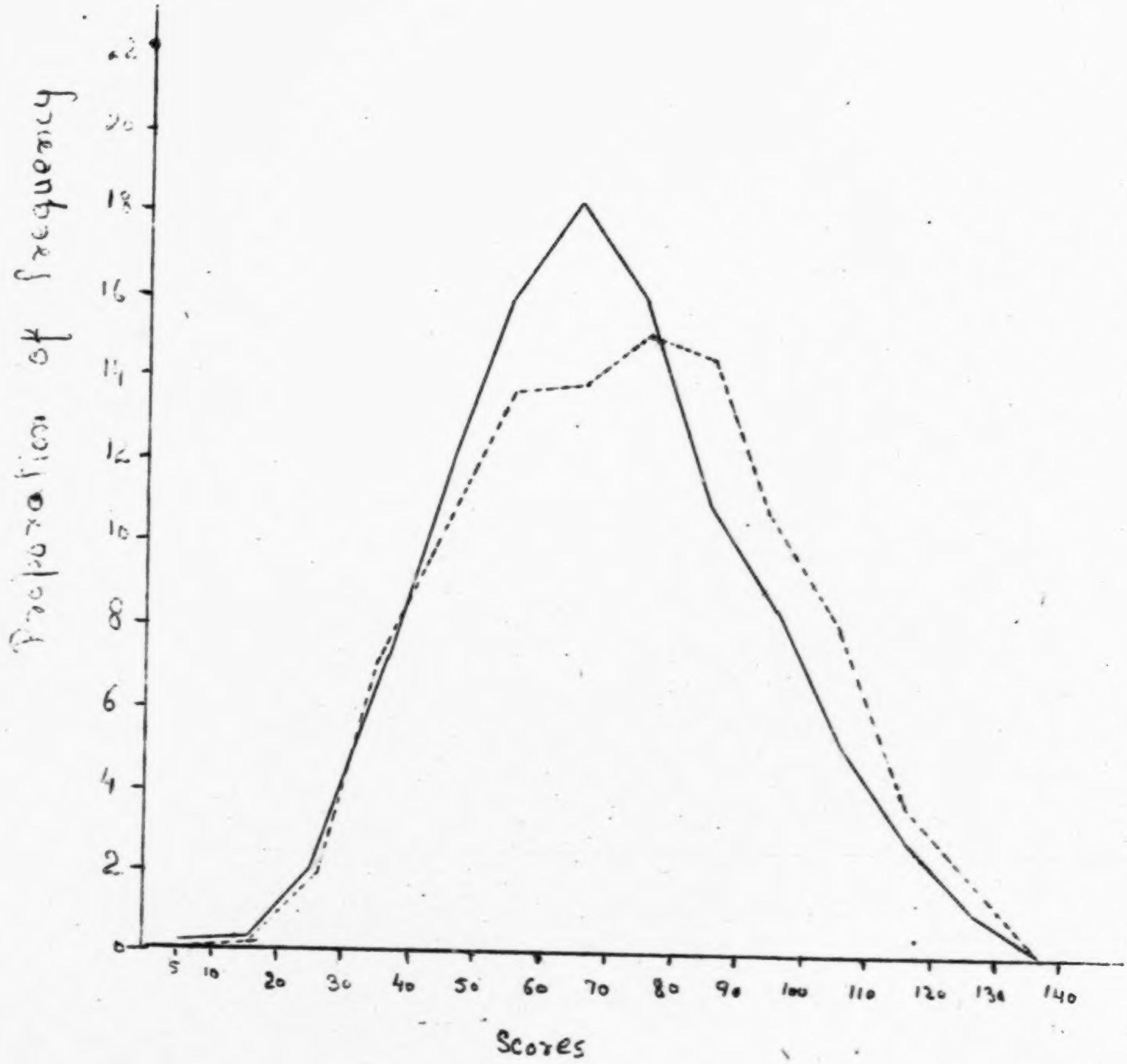
Table 18 (b)

Grade XI

Variable			Delhi			Uttarpradesh			Rajasthan			Madhya Pradesh		
			M	SD	N	M	S.D.	N	M	SD	N	M	SD	N
V	A	SS*	57.89	19.13	200	62.65	19.84	-	69.34	19.11	200	61.77	21.38	200
		TS	58.46	18.88	493	61.25	20.71	895	67.23	20.45	404	63.09	21.38	947
	B	SS	65.41	23.87	200	61.66	22.71	200	73.69	17.75	200	62.89	27.67	200
		TS	64.05	22.05	444	60.90	20.42	706	72.13	20.72	447	61.53	22.36	1024
N	A	SS	30.87	11.78	200	29.90	14.03	-	28.16	14.48	200	25.19	12.09	200
		TS	30.66	12.83	493	29.39	13.68	895	26.67	14.29	404	25.79	12.59	947
	B	SS	33.20	13.66	200	28.07	12.48	200	31.76	13.13	200	27.88	14.16	200
		TS	32.78	12.17	444	27.93	12.37	706	30.36	13.50	447	26.50	12.10	1024
(V + N)	A	SS	88.76	26.40	200	92.55	29.72	-	97.50	29.74	200	86.96	30.01	200
		TS	89.21	25.03	493	90.68	30.76	895	93.56	30.53	404	88.71	30.01	947
	B	SS	98.61	33.08	200	89.73	31.76	200	105.45	26.68	200	90.77	38.20	200
		TS	97.08	24.07	444	88.57	29.12	706	102.16	27.93	447	87.68	30.19	1024

* SS for selected sample
TS for total sample.

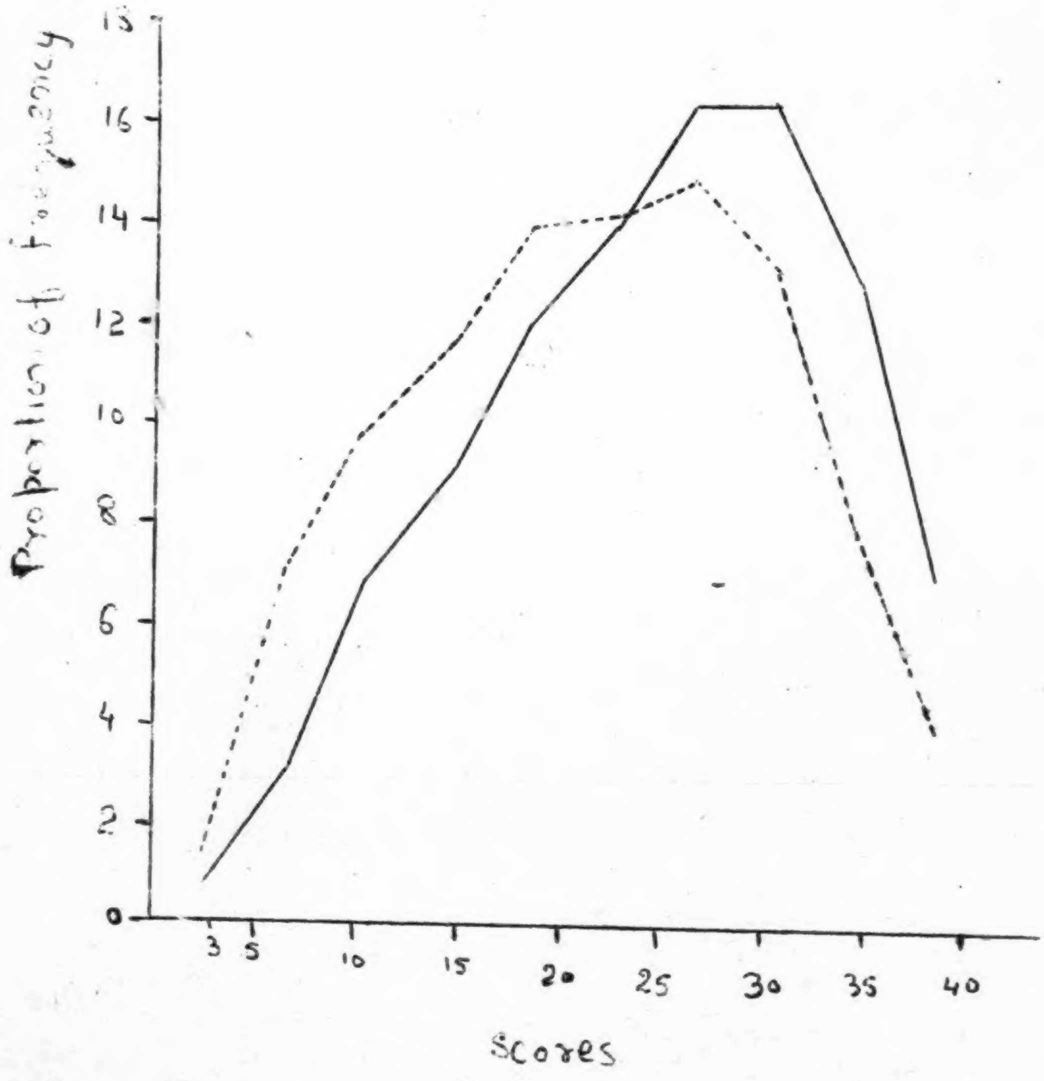
Distributions of Scores in form A and B
Form V - Delhi grade VIII



Note:- in all graphs form A is given by unbroken line and form B by broken line.

S B. Gupta

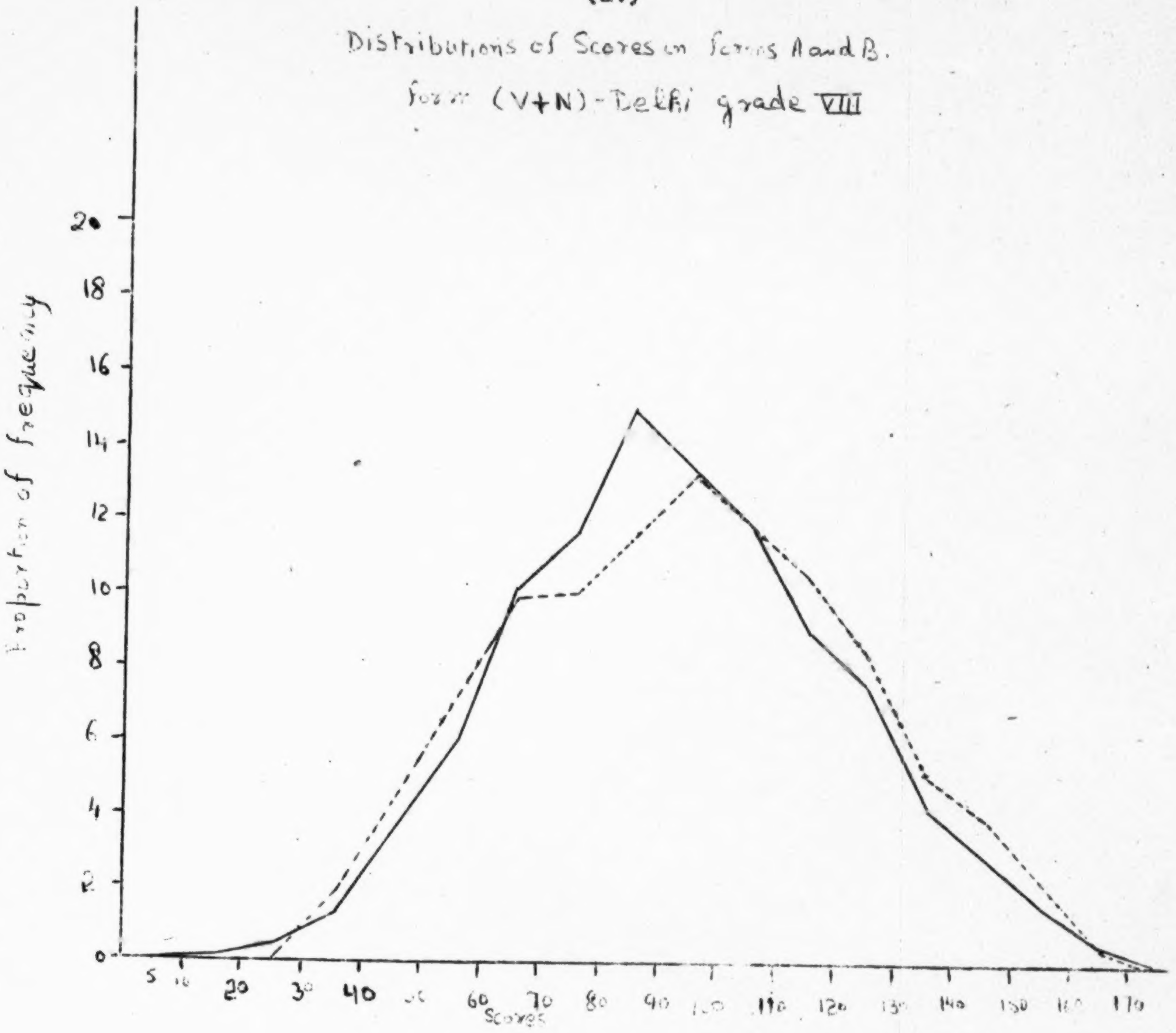
Distribution of Scores in forms A and B
form N - Delhi grade VIII



B. Gupta

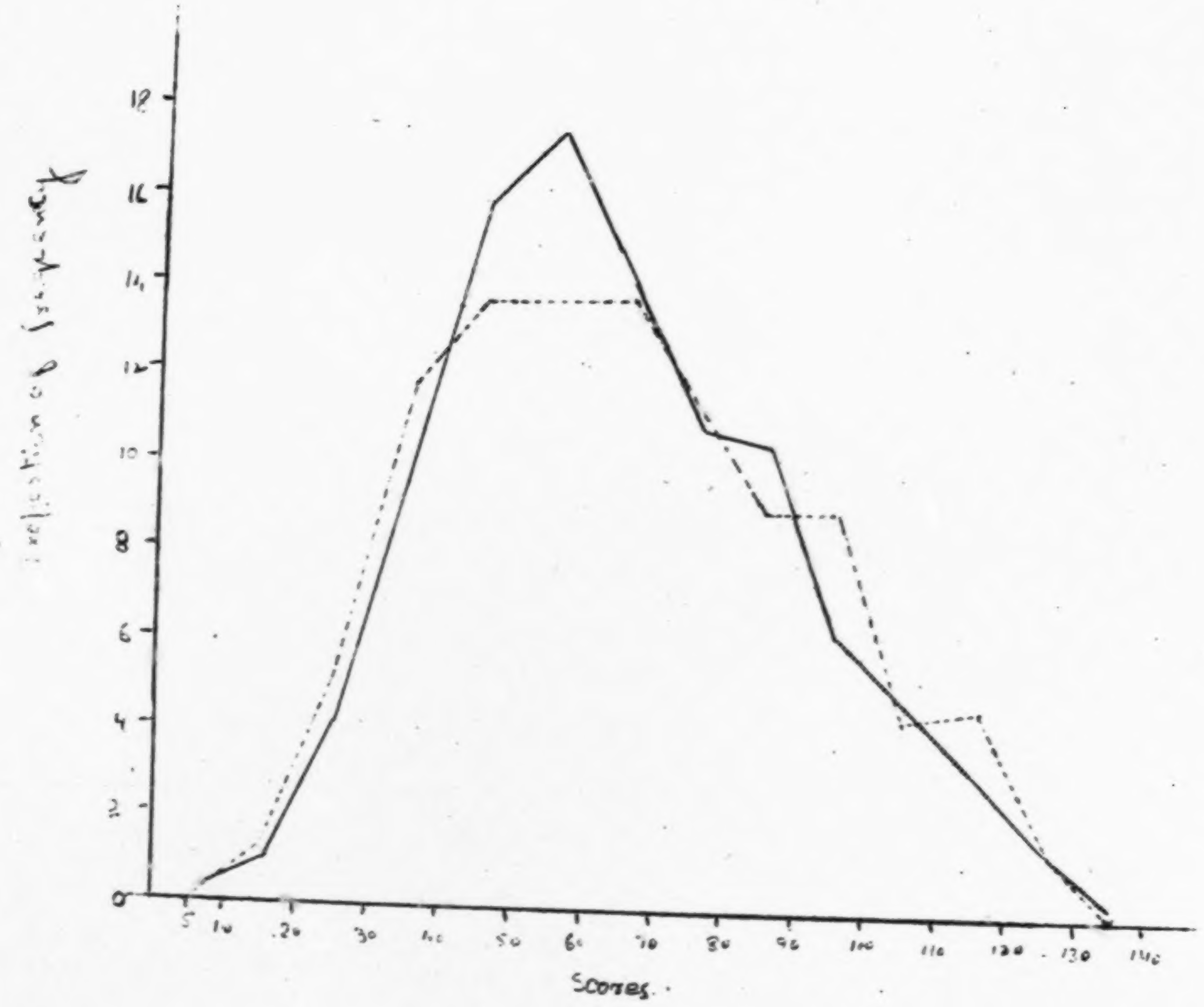
(iv)

Distributions of Scores on forms A and B.
form (V+N) - Delhi grade VIII



S P Gupta

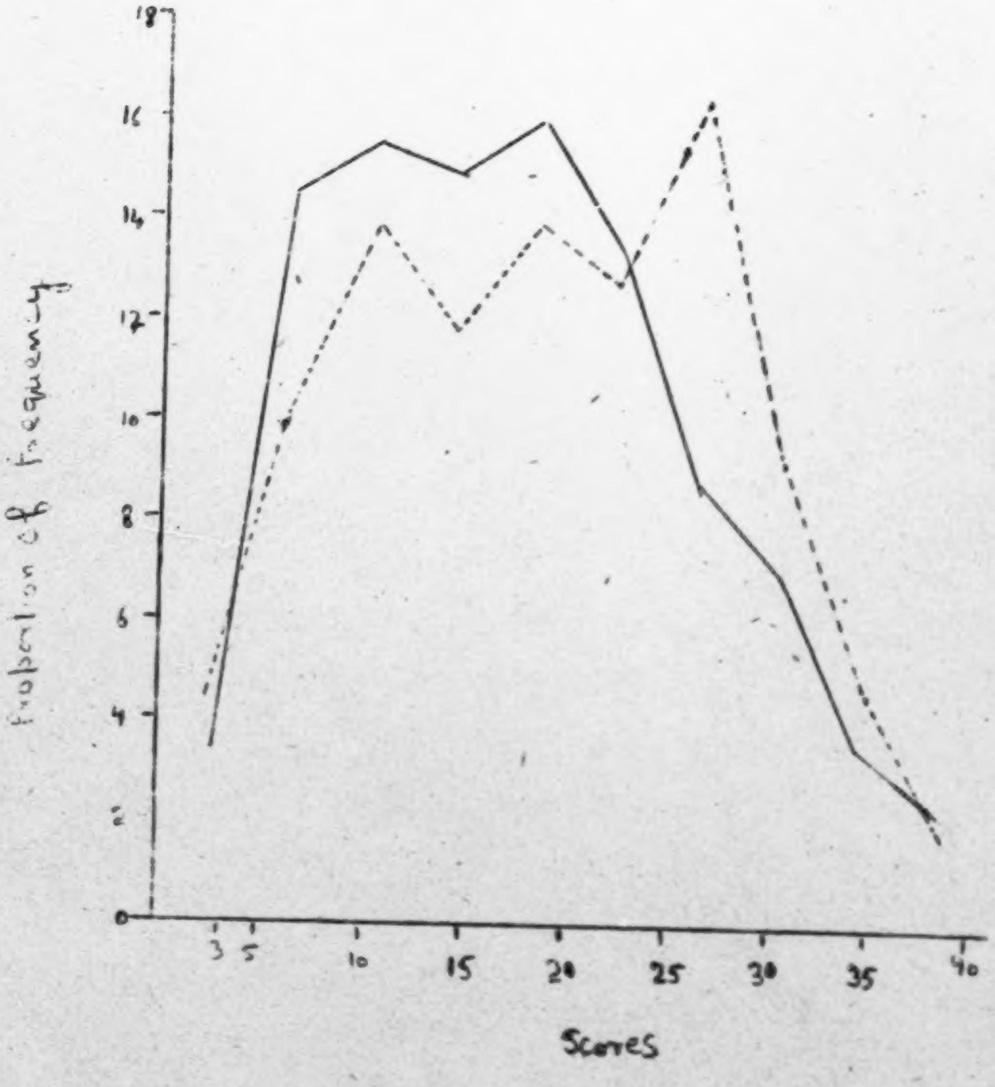
Distributions of Scores in forms A and B.
form V - UP grade - VIII



S.B. Gupta.

Distributions of Scores in forms A and B.

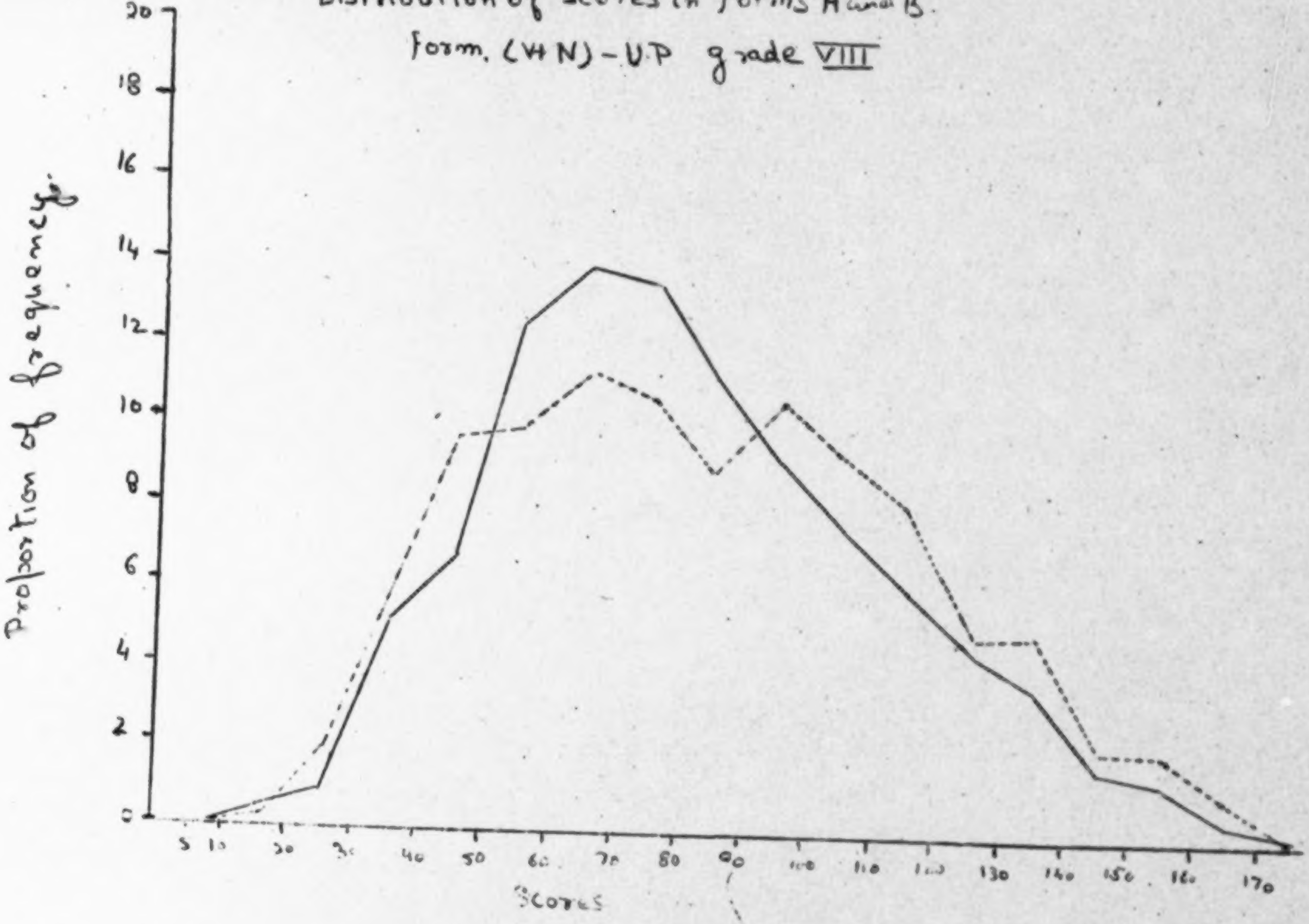
form N- UP grade VIII



S.B. Gupta.

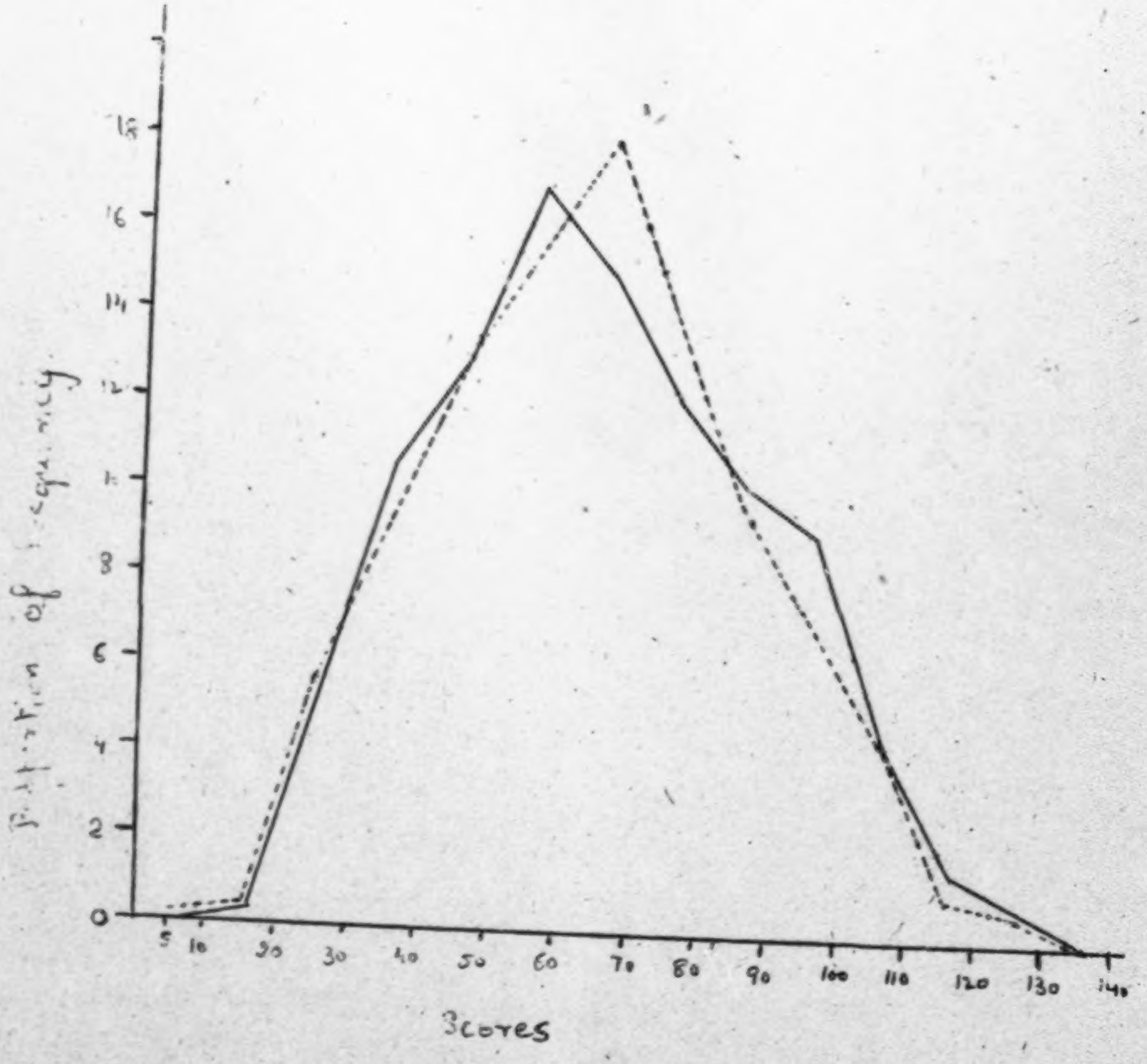
(VI.)

Distribution of Scores in forms A and B.
form. (H N) - U.P grade VIII



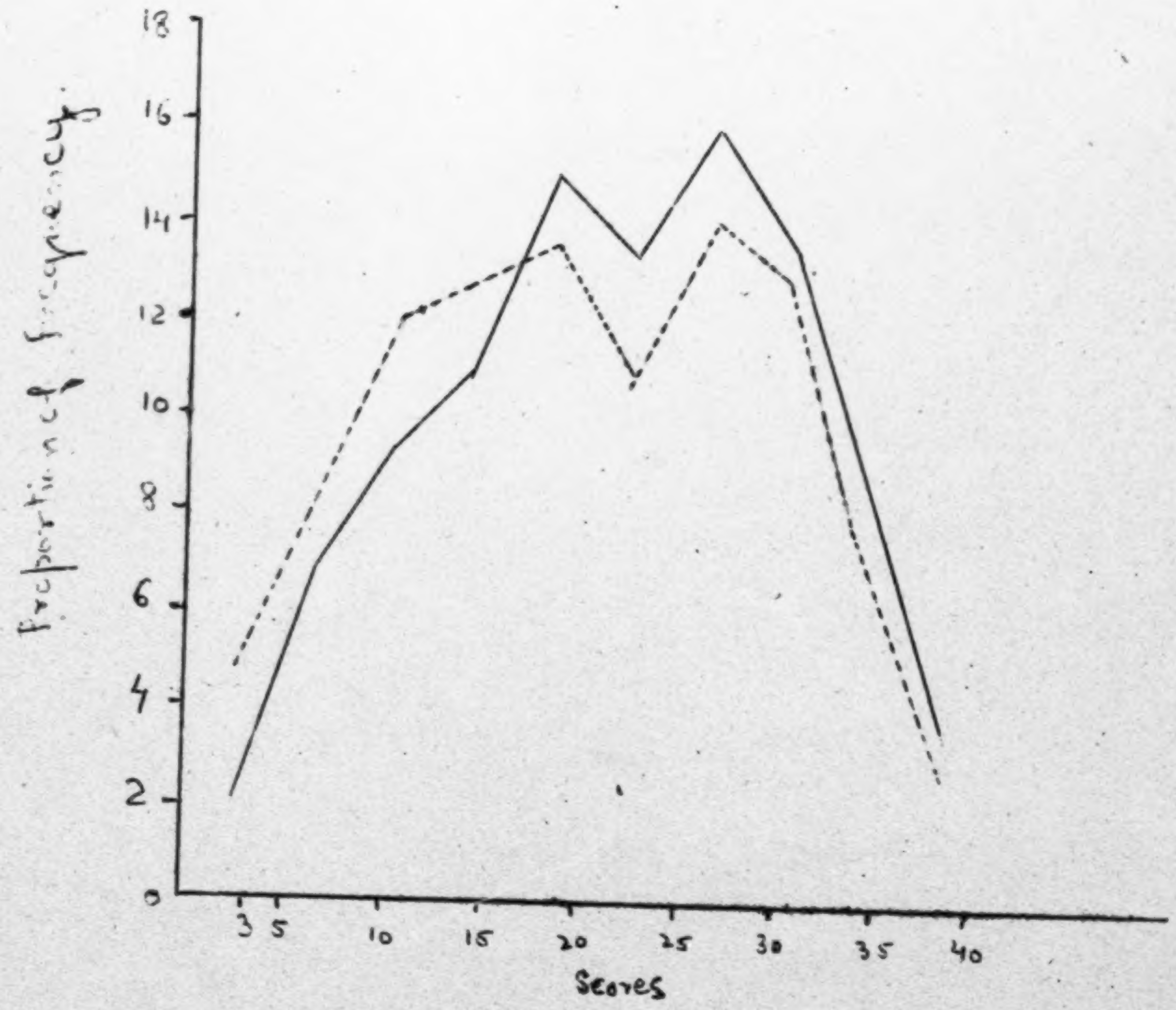
S.B. Gupta

Distribution of Scores in forms A and B.
Form V - Bihar grade VIII



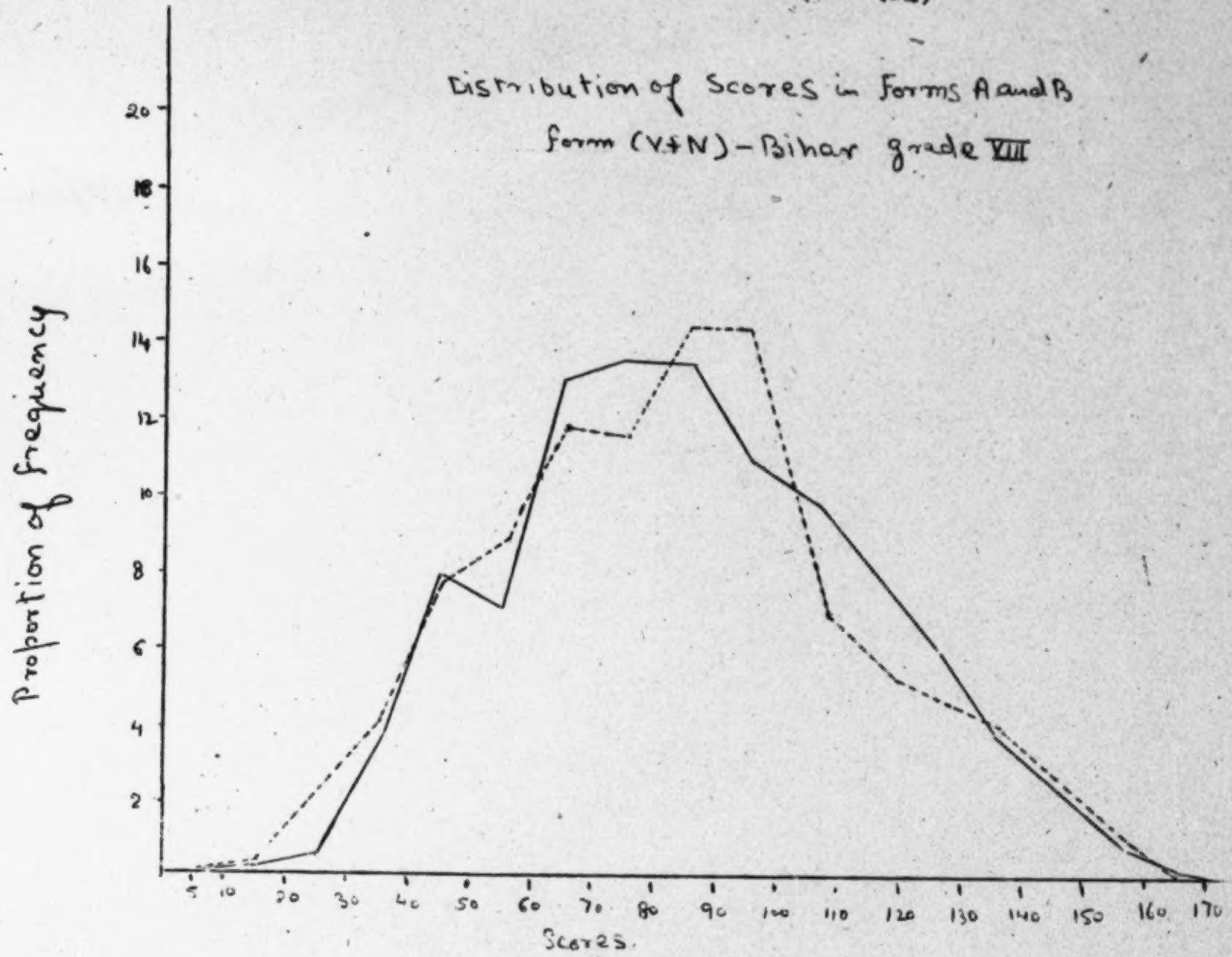
C.D. Gupta

Distribution of Scores in forms A and B.
Form N - Bihar grade VIII



S B Gupta.

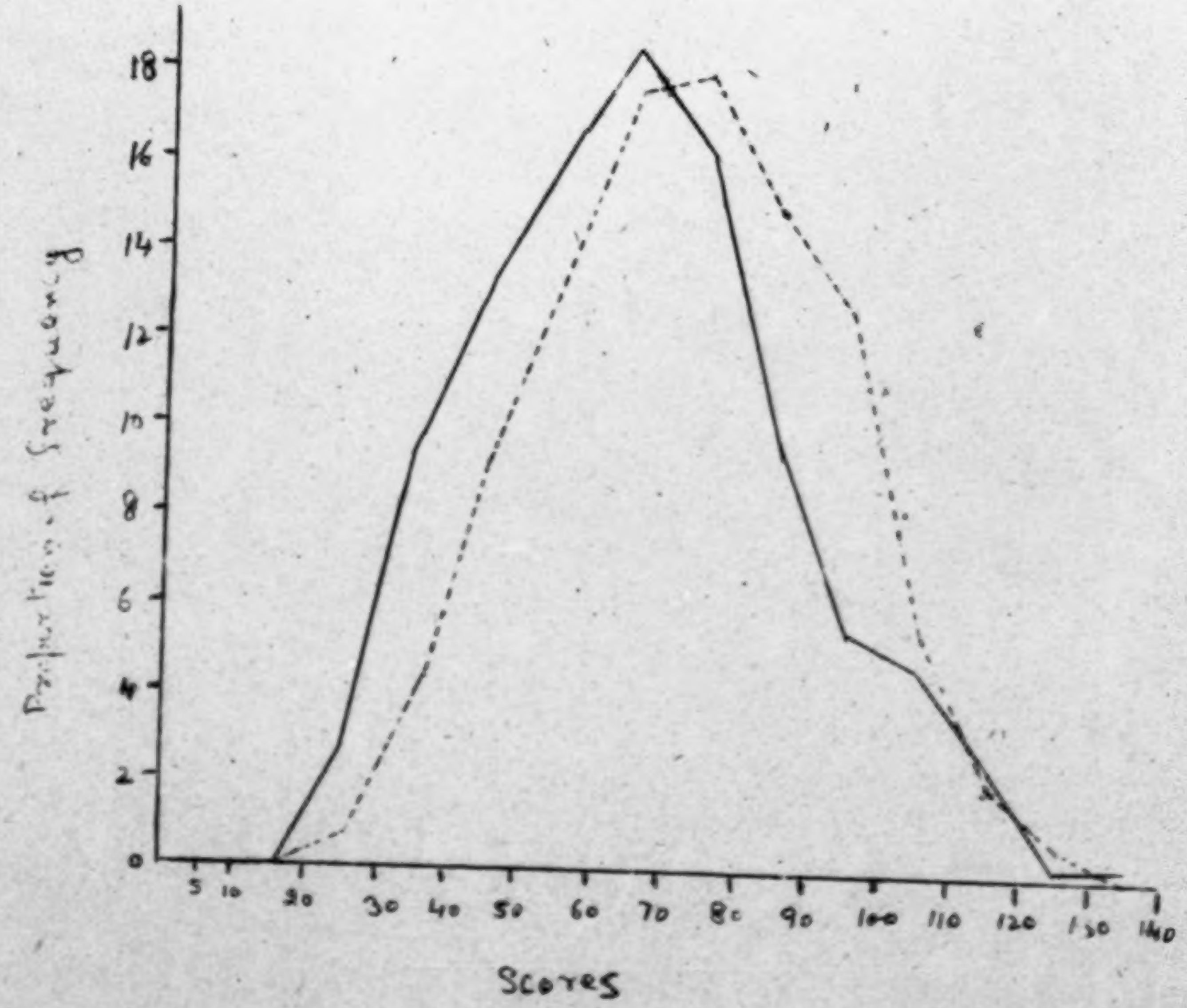
(1x)



Distribution of Scores in Forms A and B form (V+N) - Bihar grade VIII

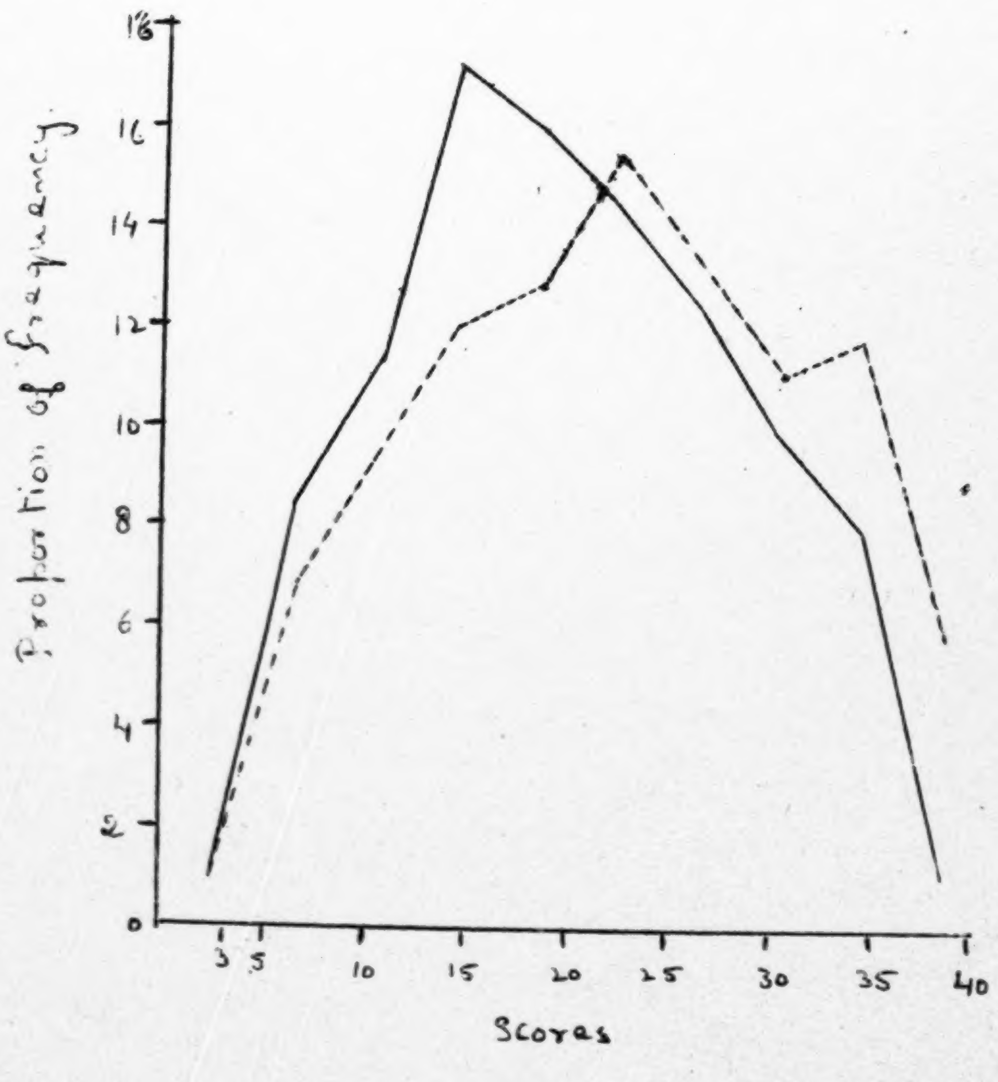
S B Gupta

Distribution of Scores in forms A and B
form V - Rajasthan grade VIII



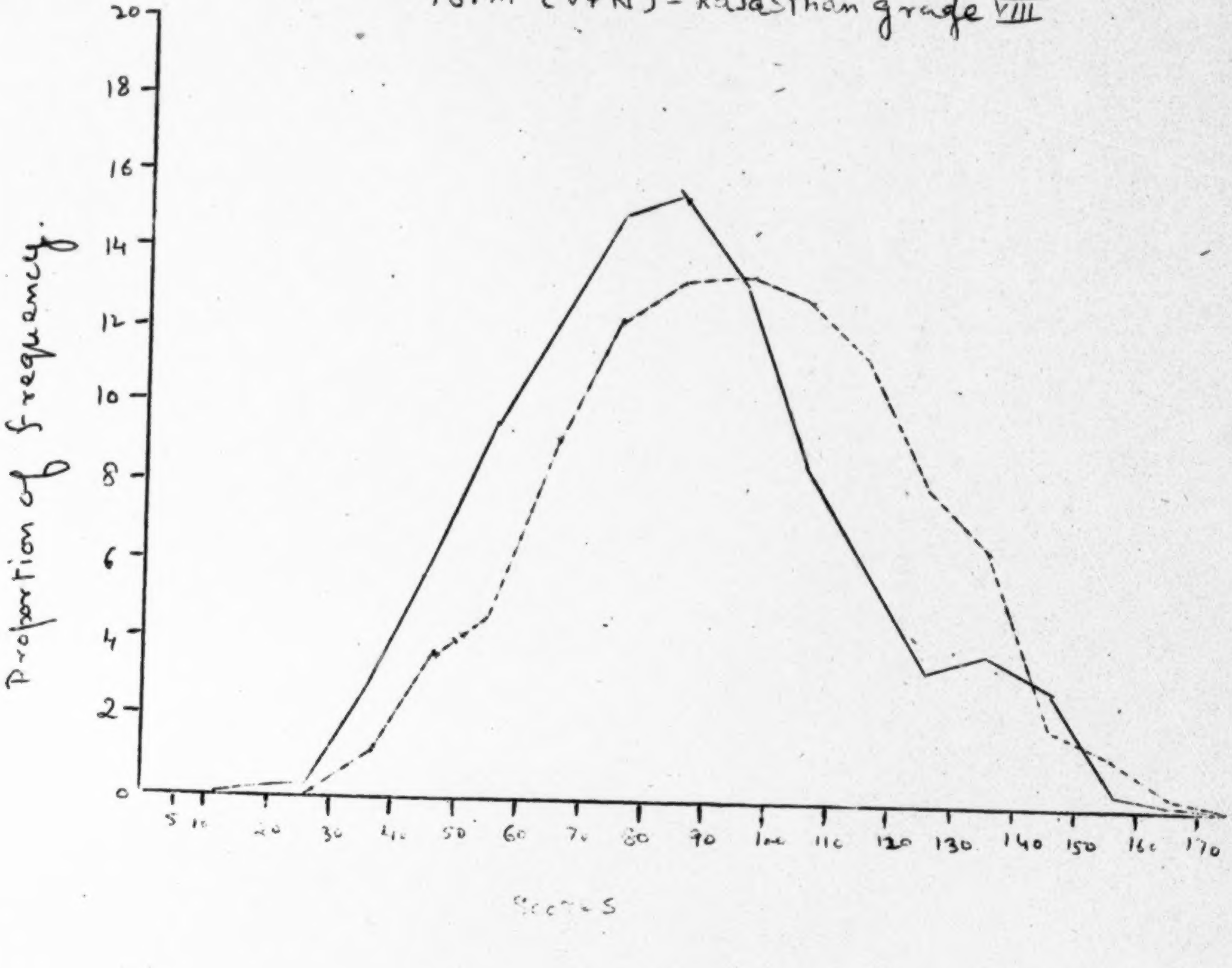
S B. Gupta

Distribution of scores in forms A and B
form N - Rajasthan grade VIII



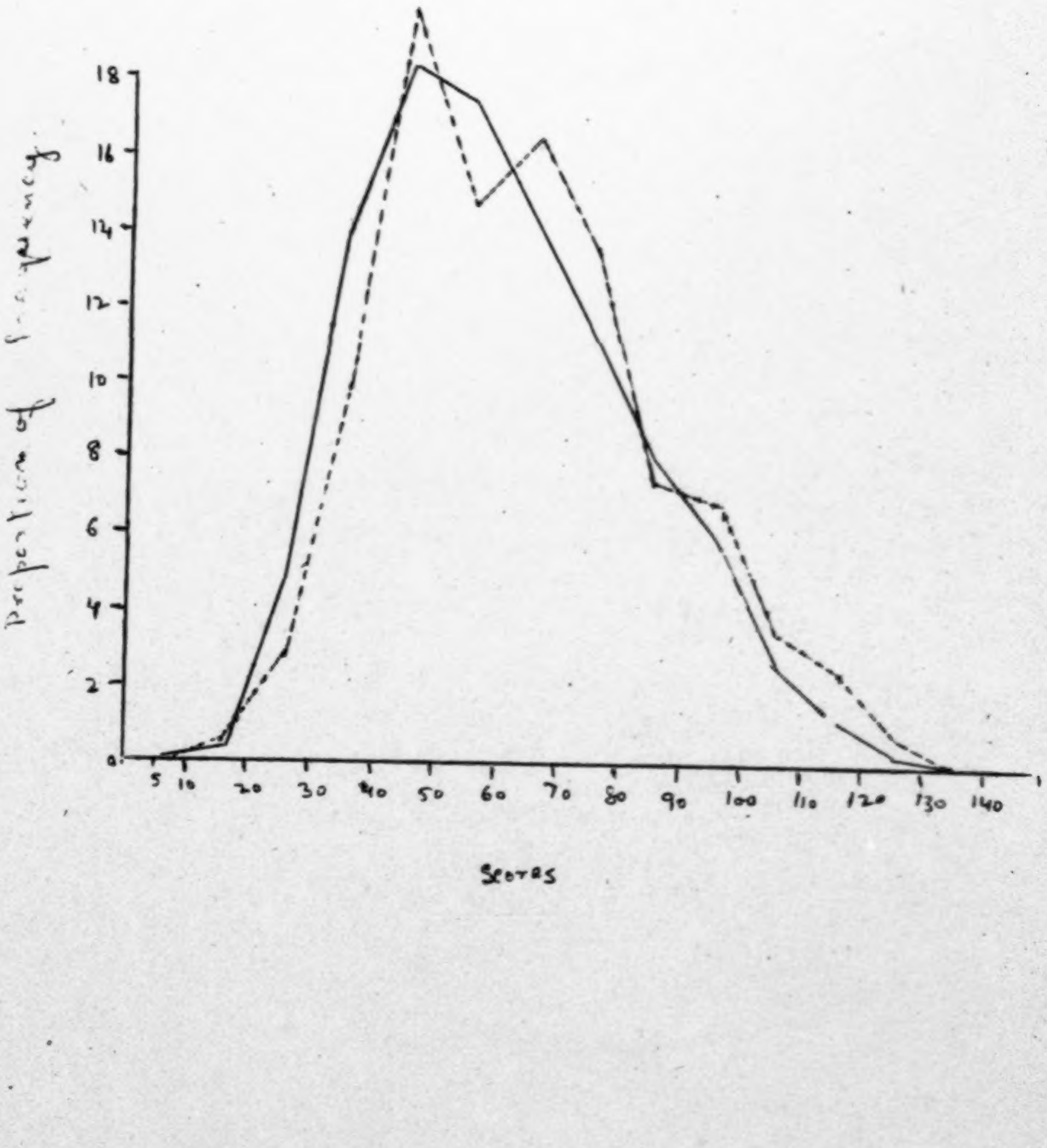
S B Gupta

Distribution of Scores in forms A and B
form (V+N) - Rajasthan grade VIII



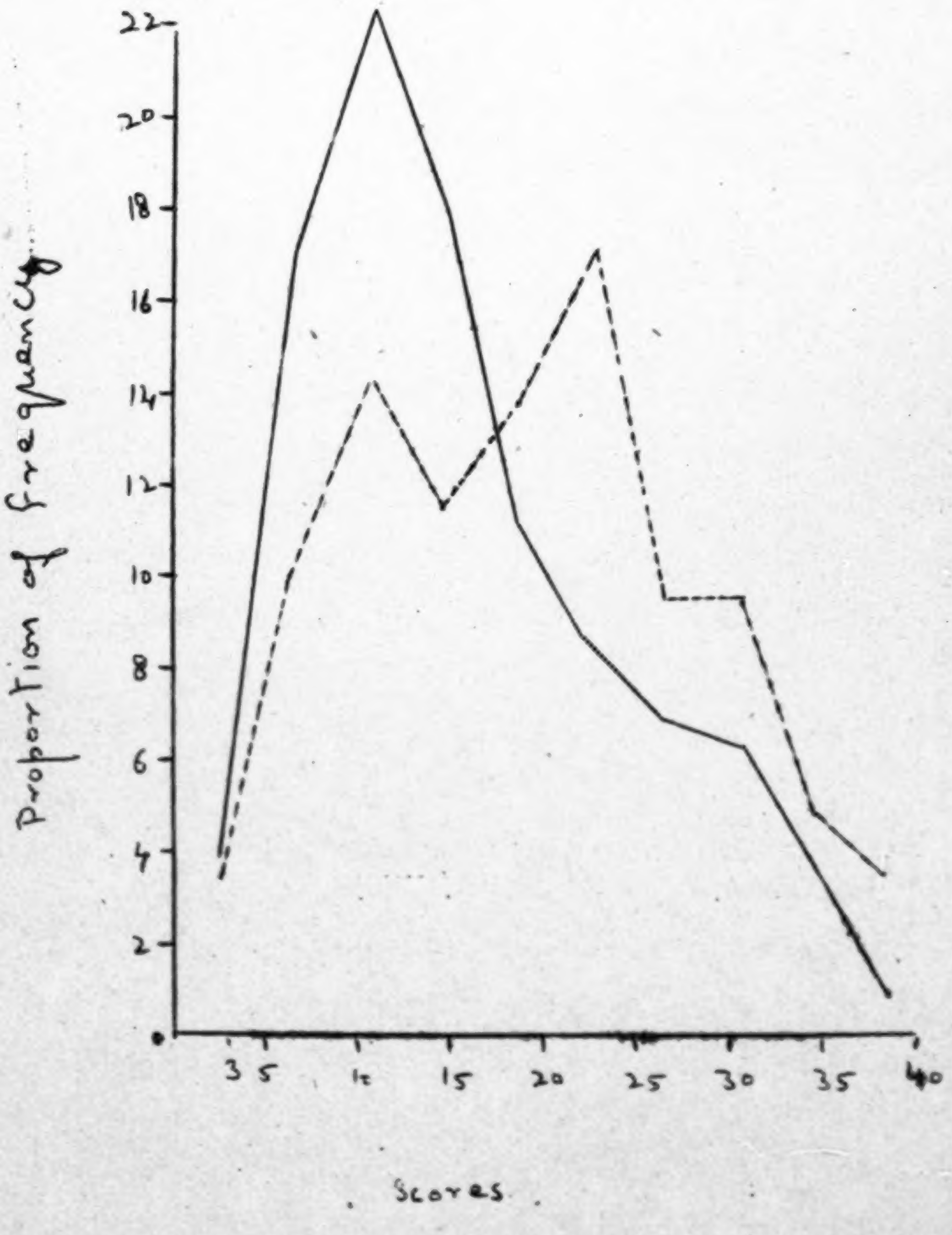
S P Gupta

Distribution of Scores in forms A and B.
form V - M.P. grade VIII



S.B. Gupta

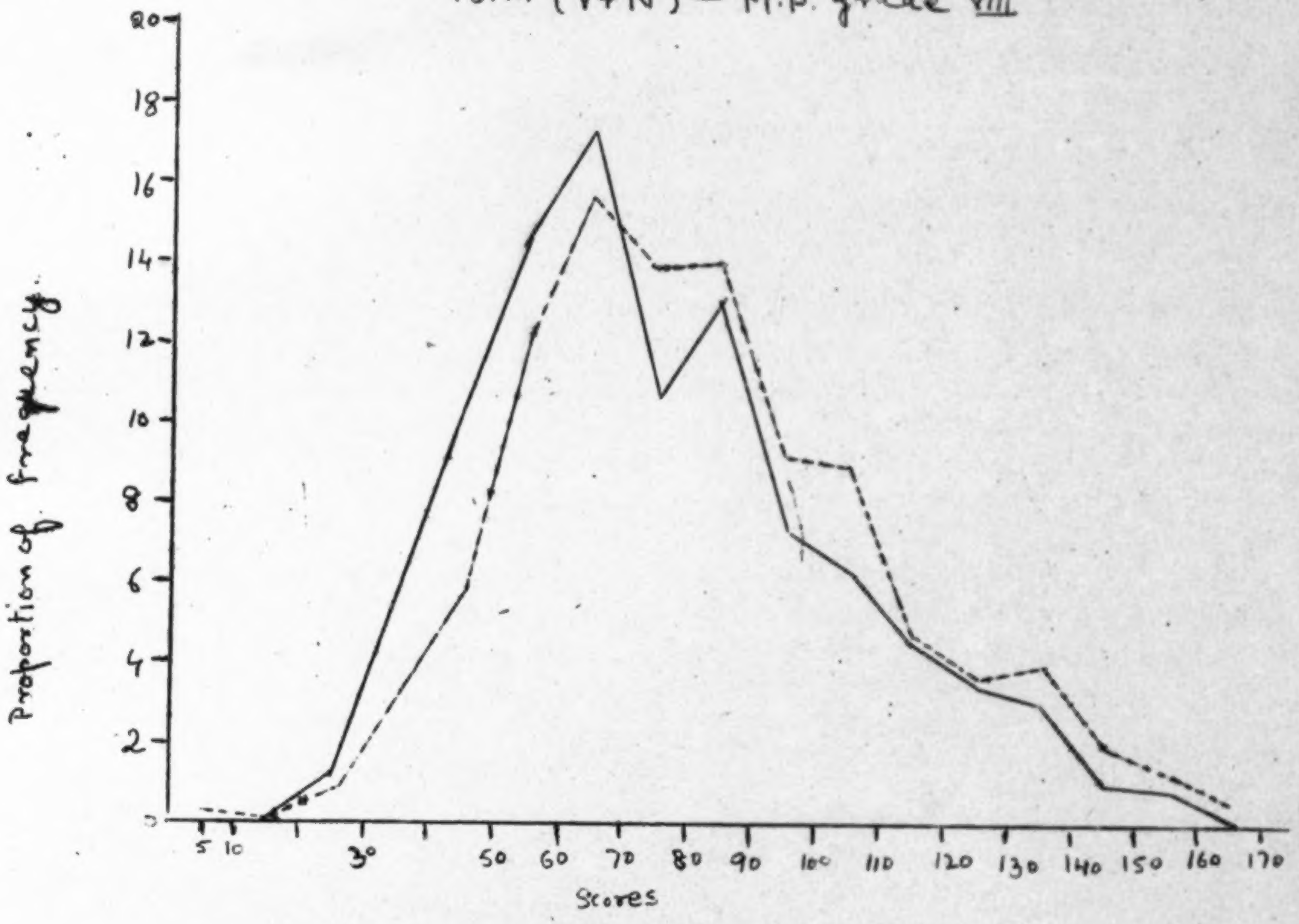
Distribution of Scores in forms A and B
form N-M.P. grade VIII



S.B. Gupta.

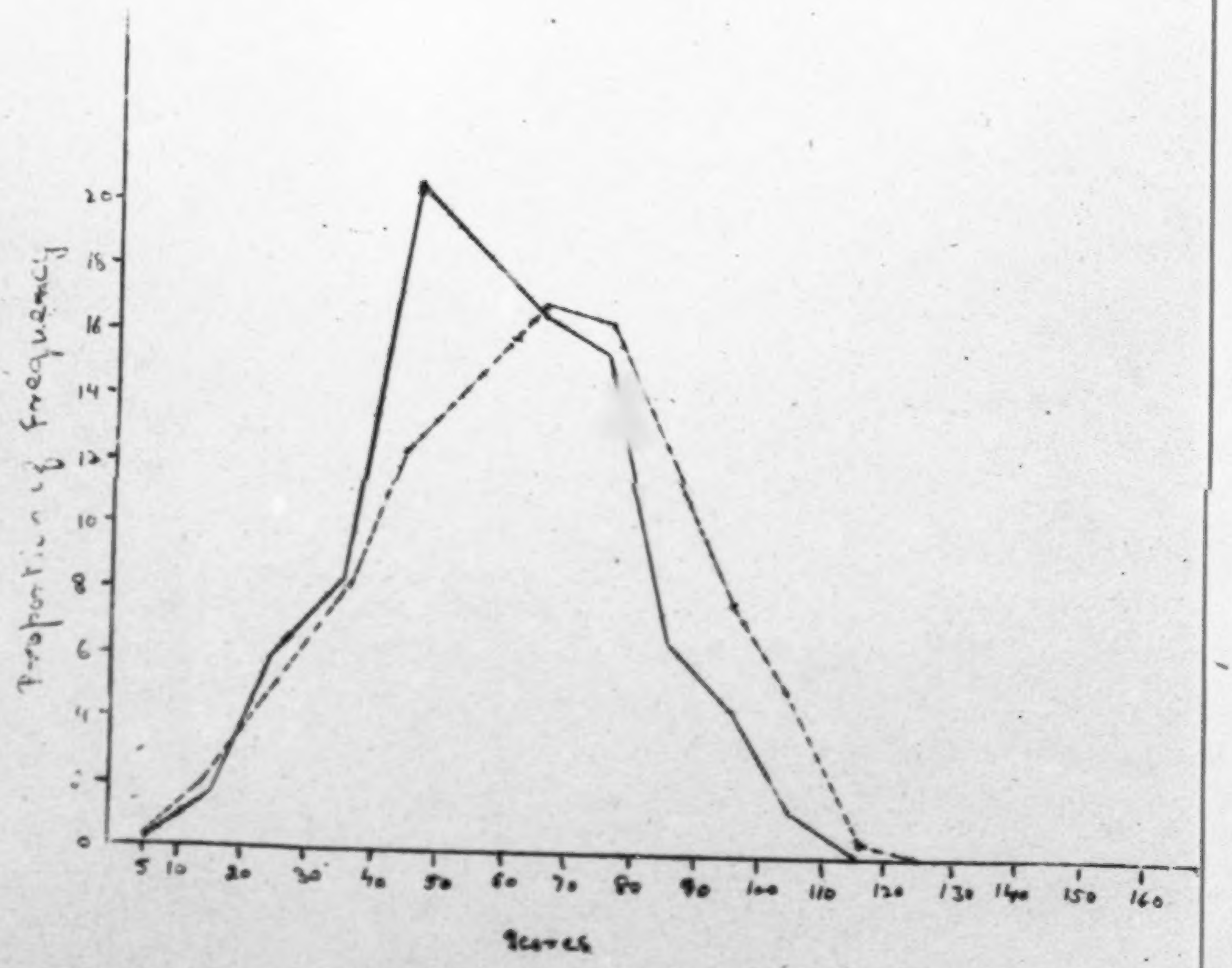
(xv. ;

Distribution of Scores in forms A and B.
form (V+N) — M.P. grade VIII



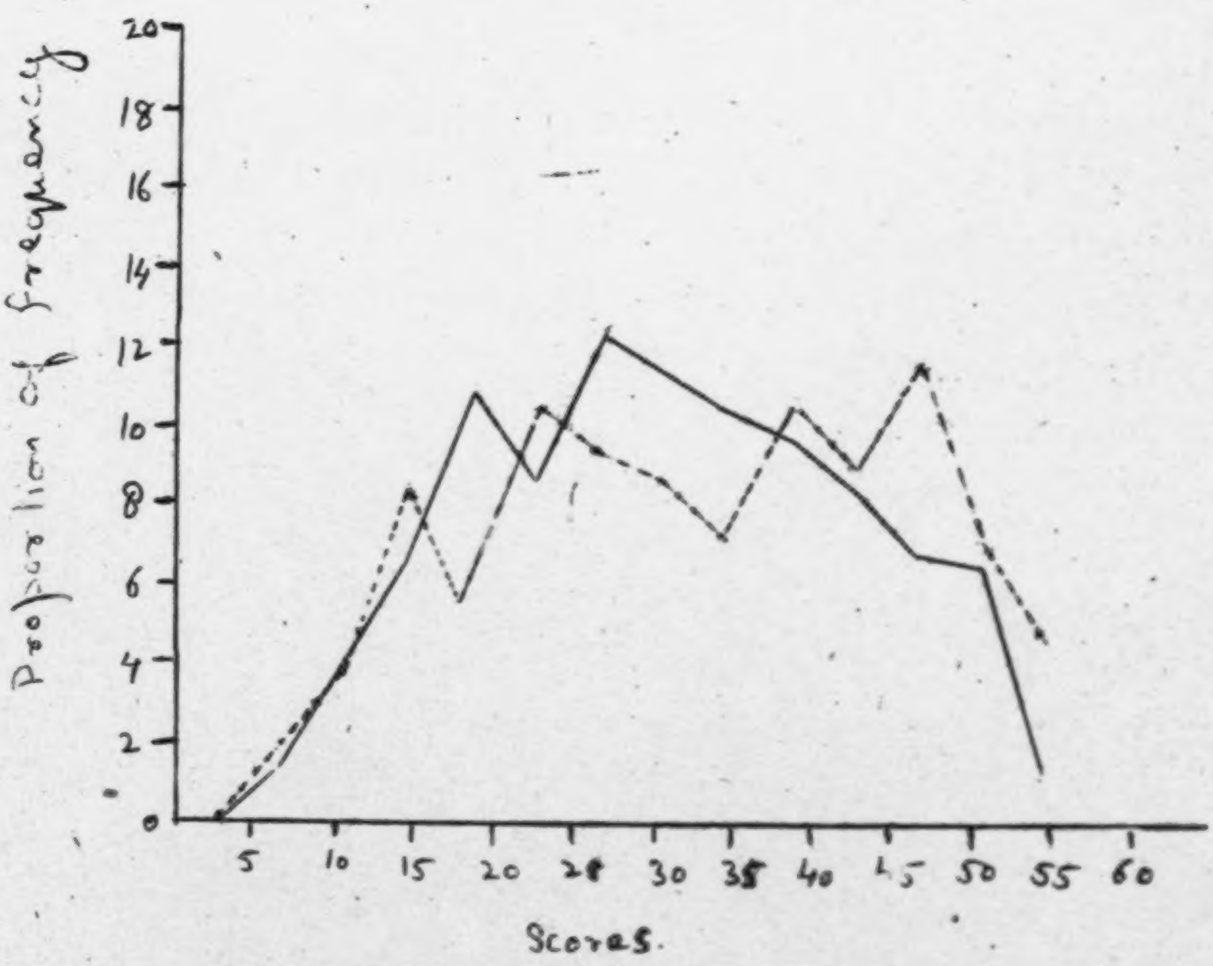
S b Gupta

Distribution of scores in forms A and B
form V - Delhi grade XI



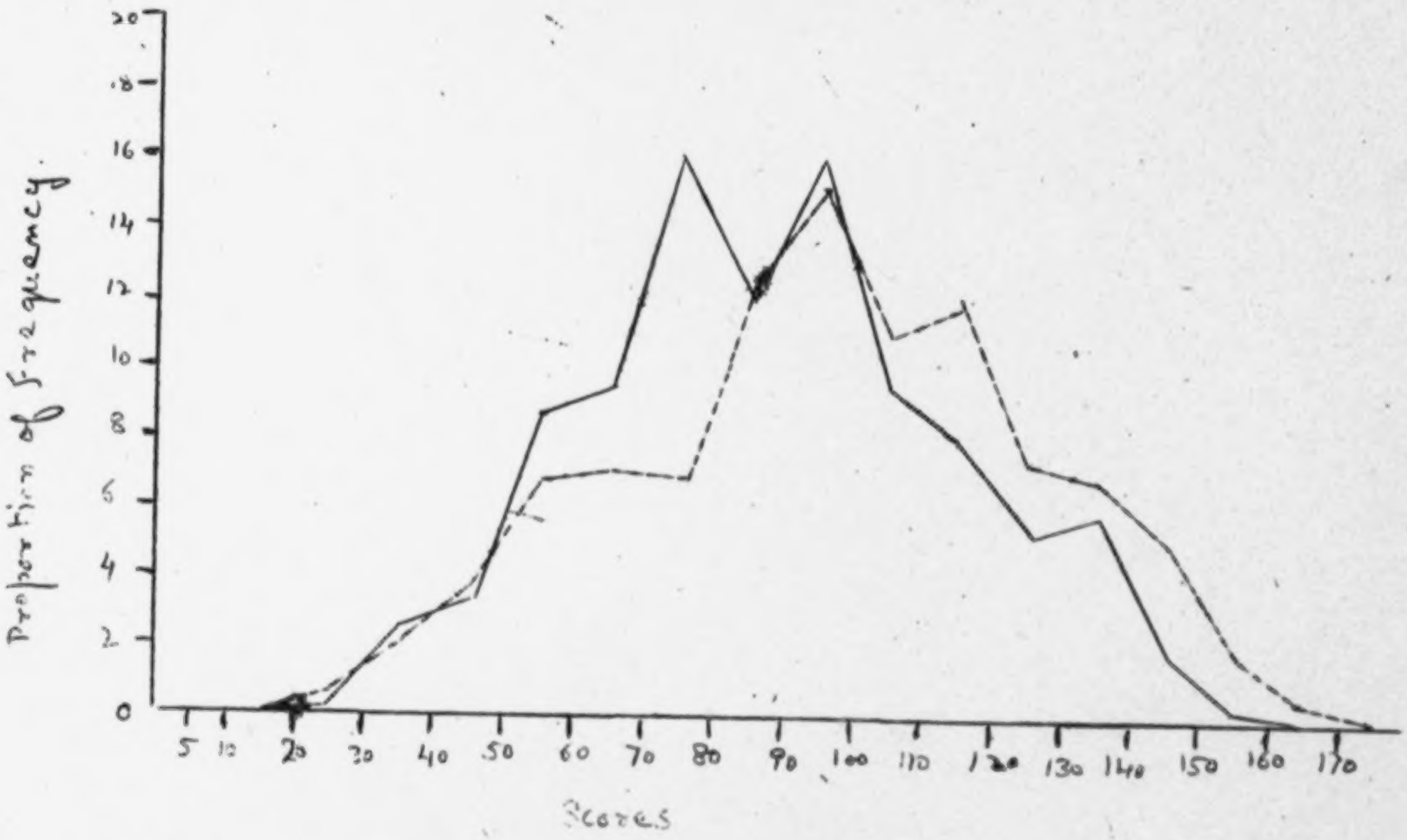
S.B. Gupta

Distribution of scores in forms A and B form N – Delhi grade XI



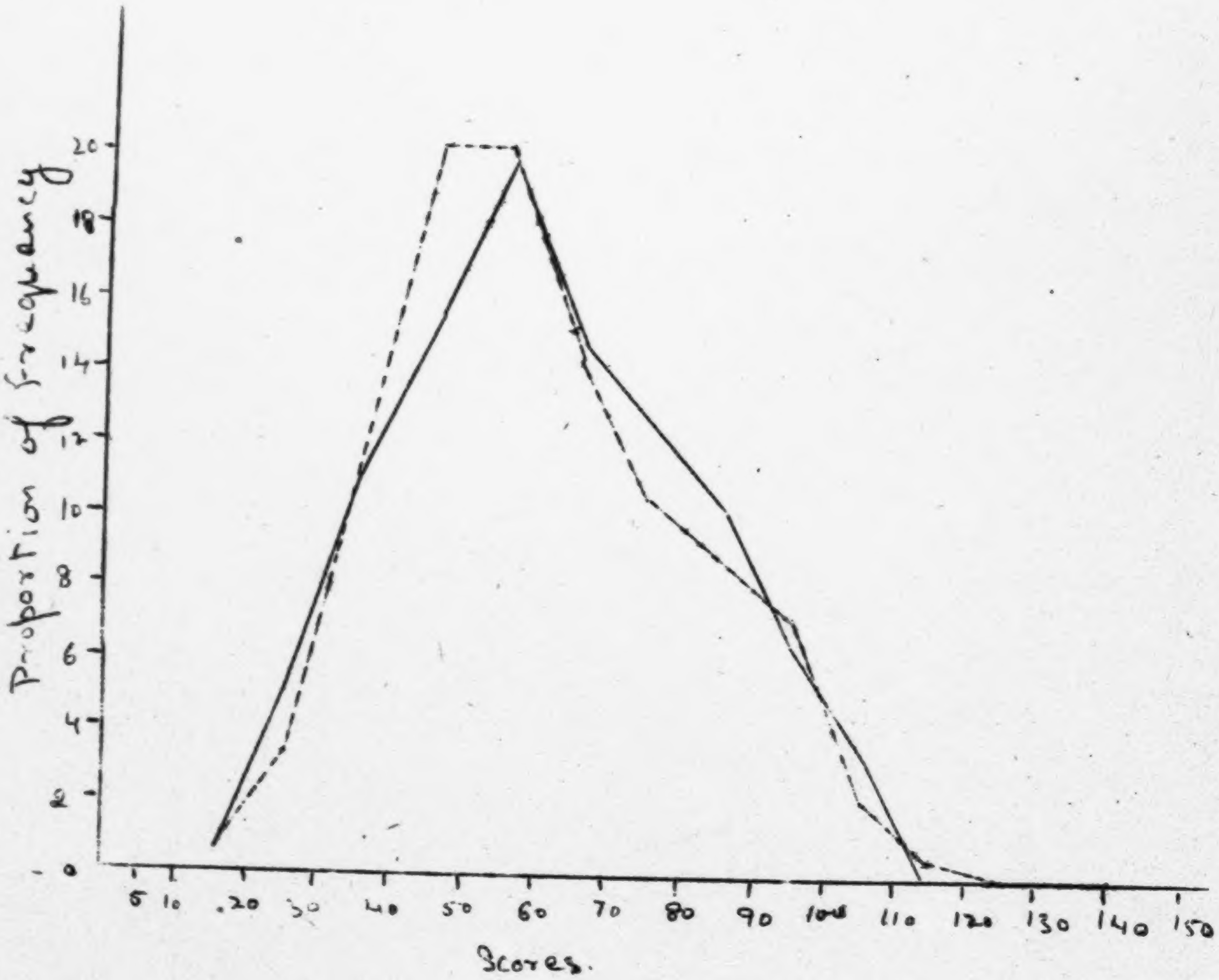
S.P. Gupta.

Distribution of Scores in Form A and B.
From V+N – Delhi grade XI



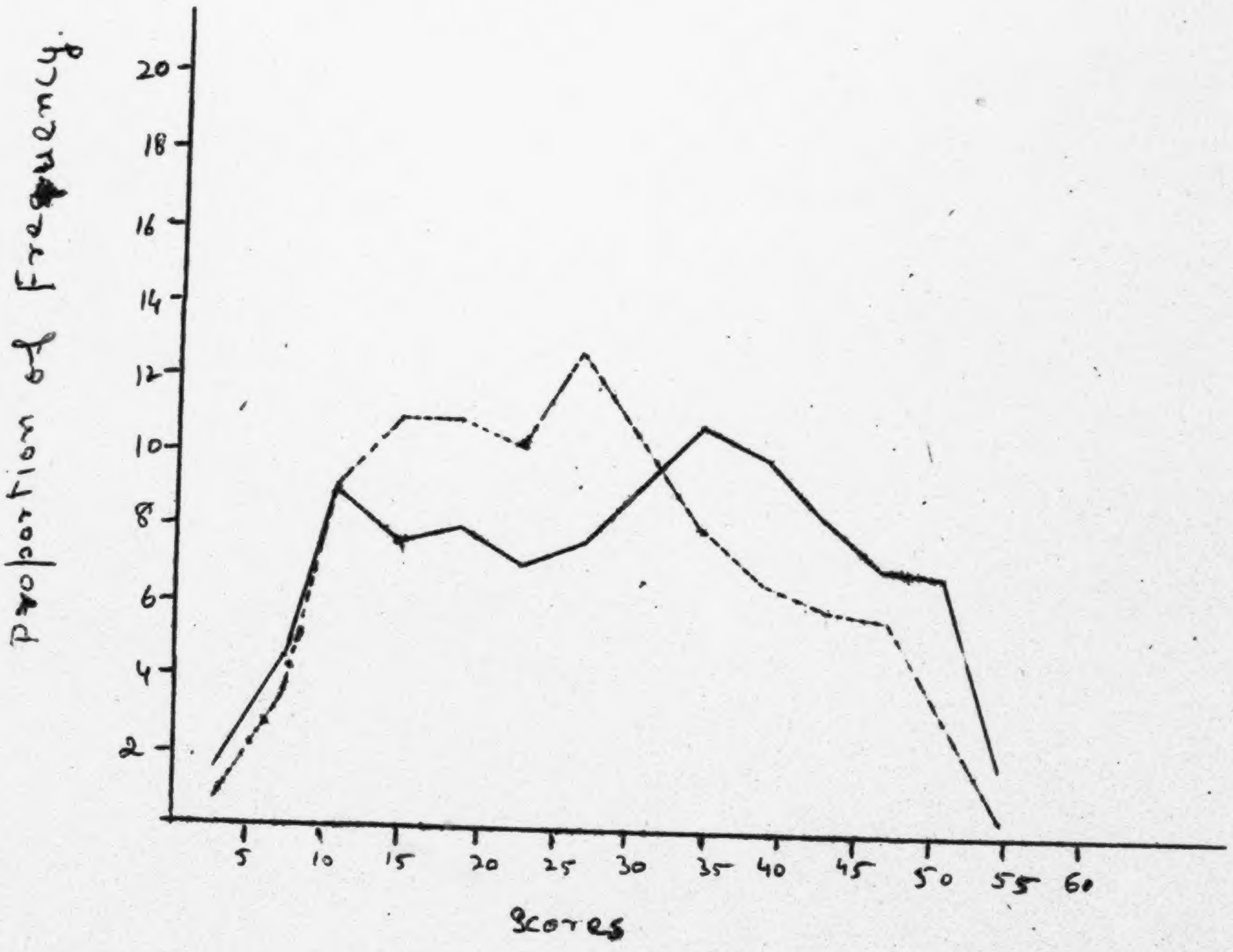
S.B.G.f.B.

Distributions of scores in Forms A and B.
form V - U.P. grade XI



S.B. Gupta

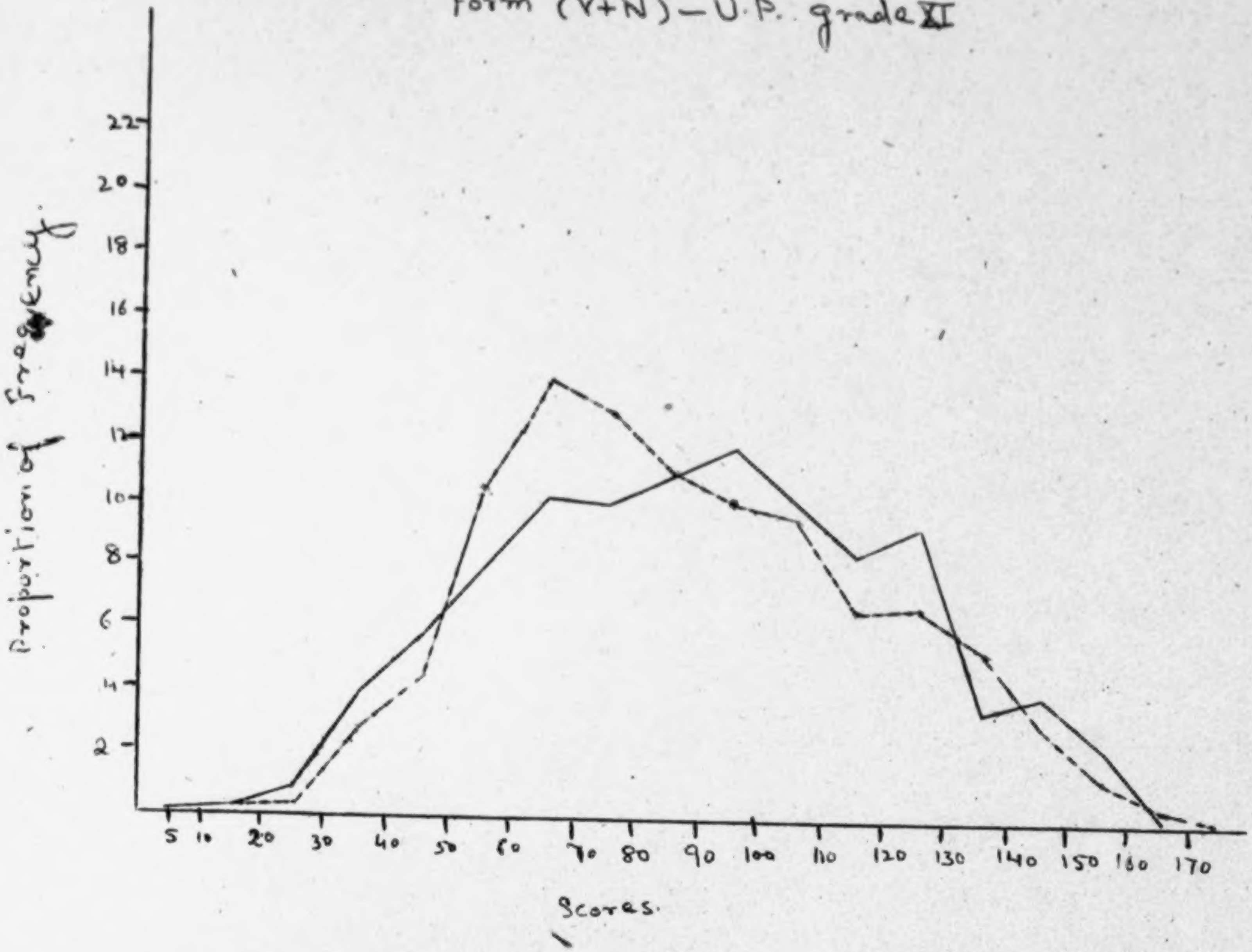
Distributions of Scores in forms A and B
form - N-U.P. grade XI



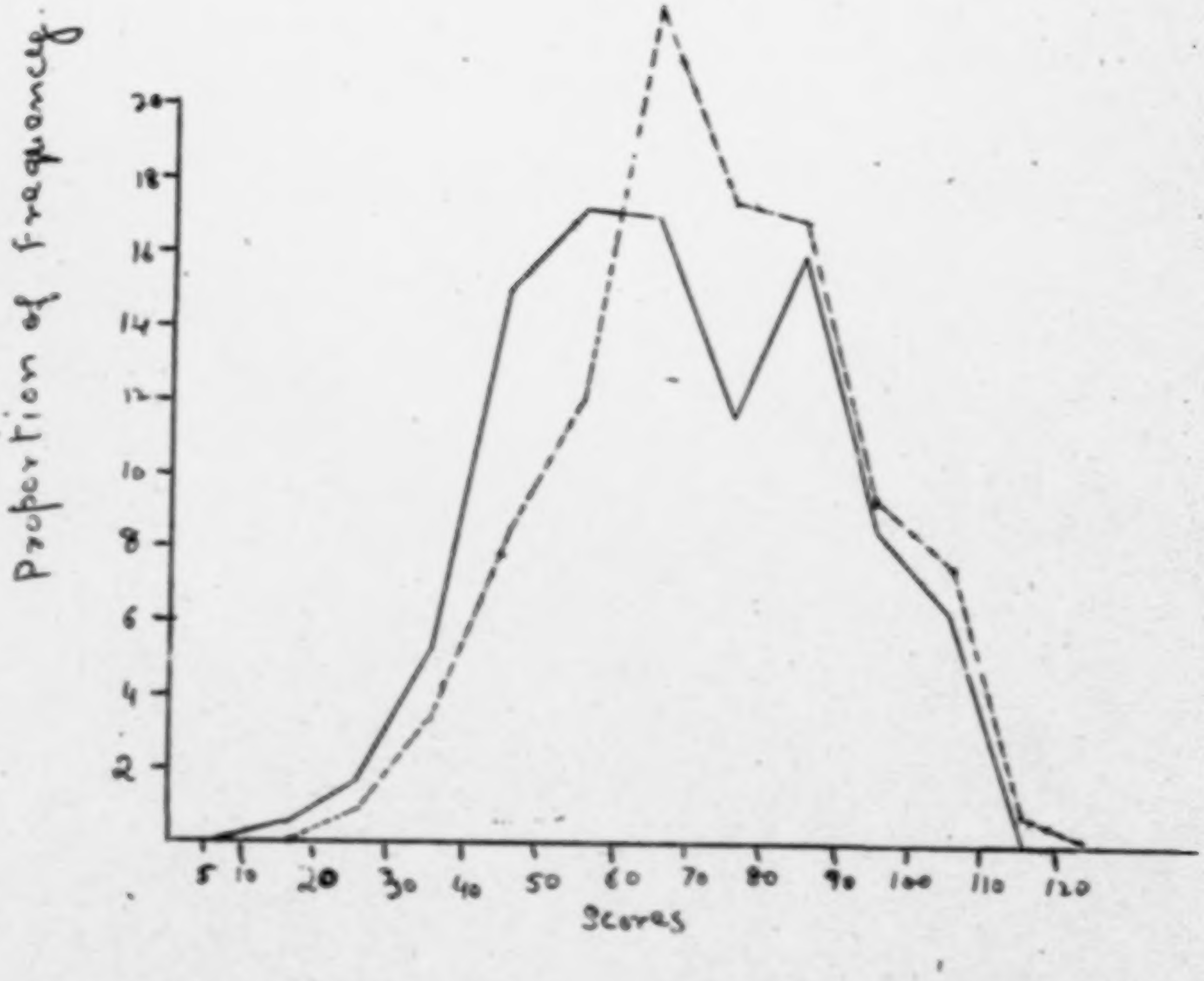
S.B Gupta

(xxi.)

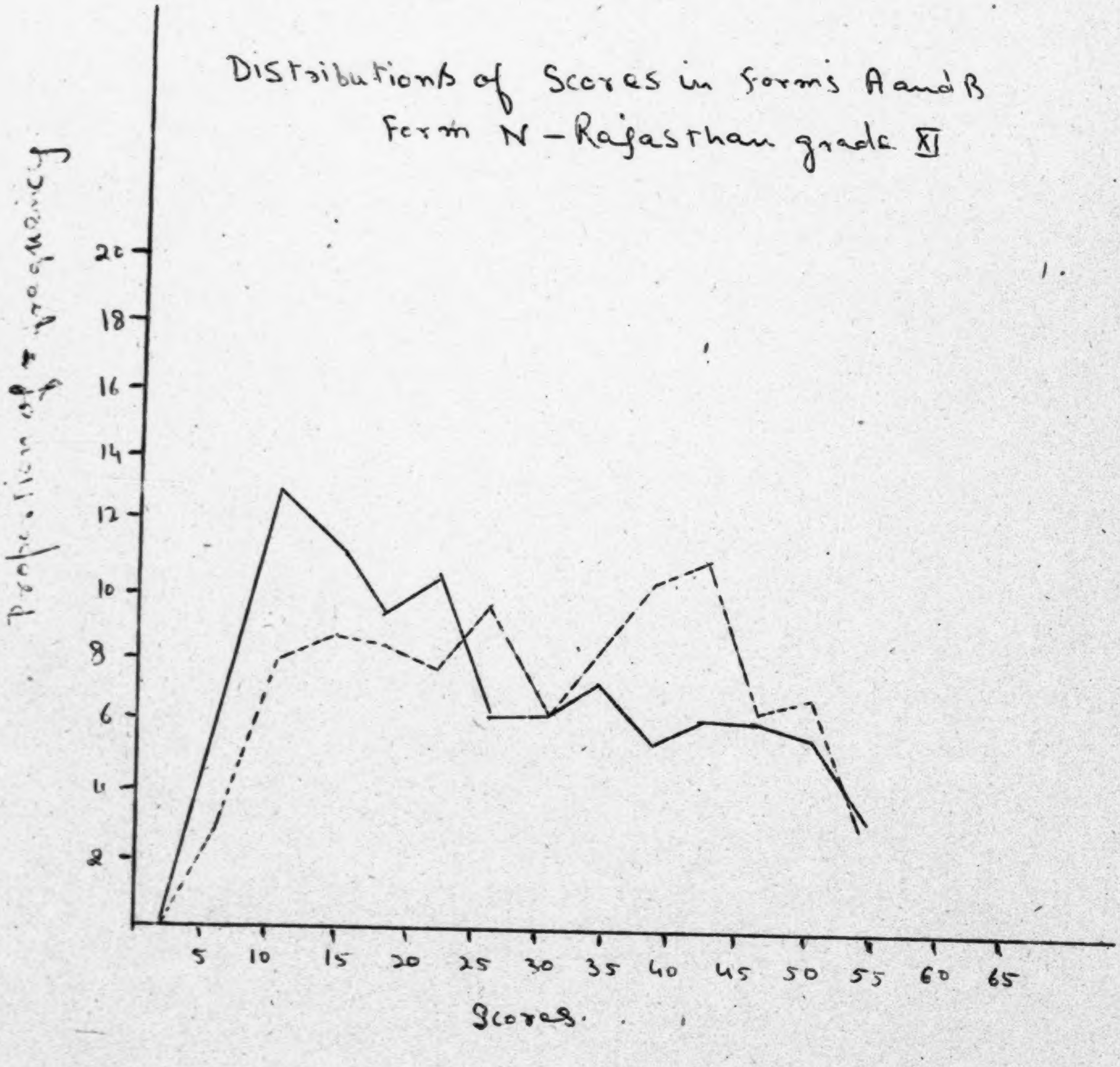
Distribution of Scores in forms A and B form (V+N) – U.P. grade XI



Distribution of Scores in Forms A and B.
Form V – Rajasthan grade XI

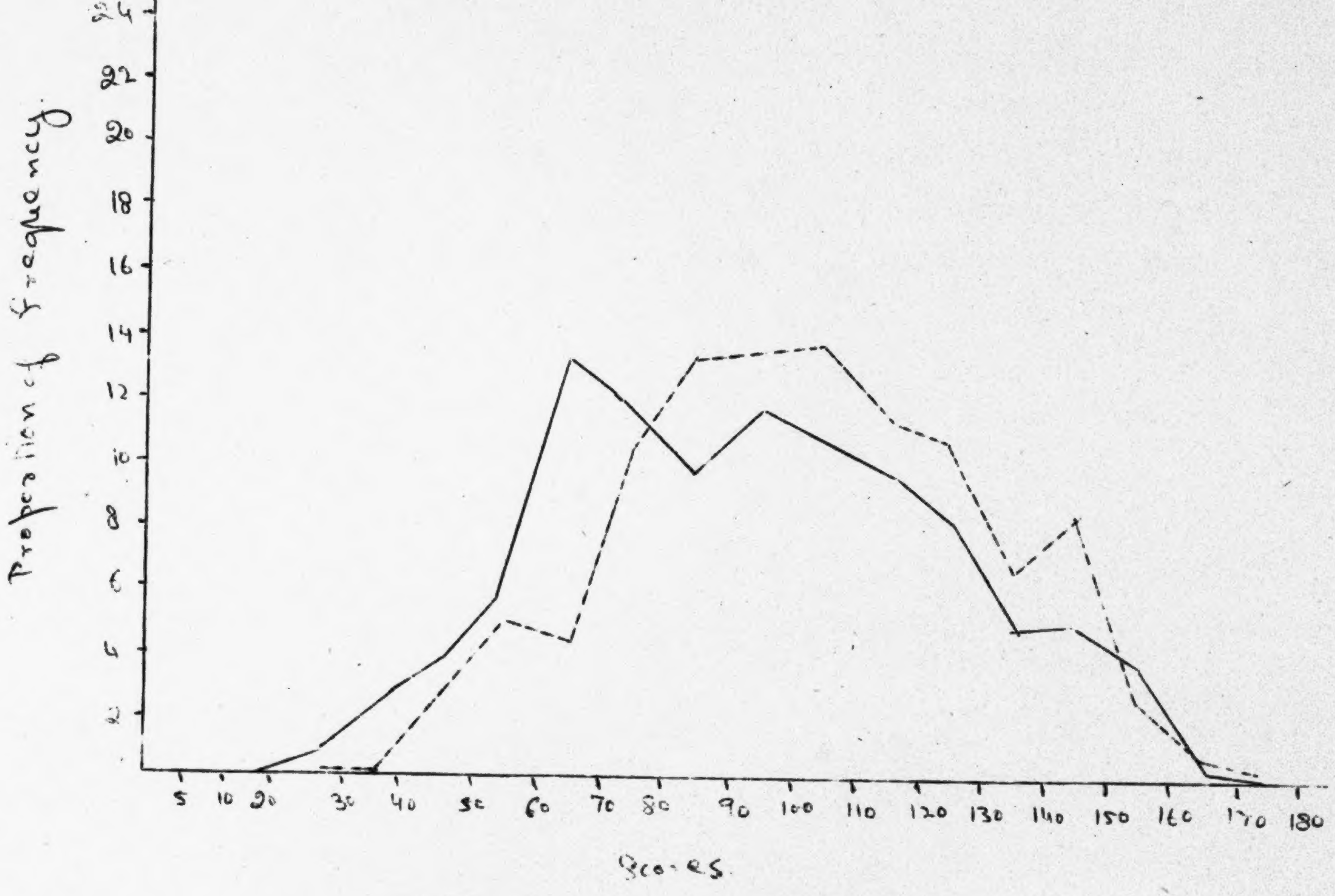


S.B. Gupta


Distributions of Scores in forms A and B
Form N – Rajasthan grade XI
Proportion of frequency
20
18
16
14
12
10
8
6
4
2
5
10
15
20
25
30
35
40
45
50
55
60
65
Scores.

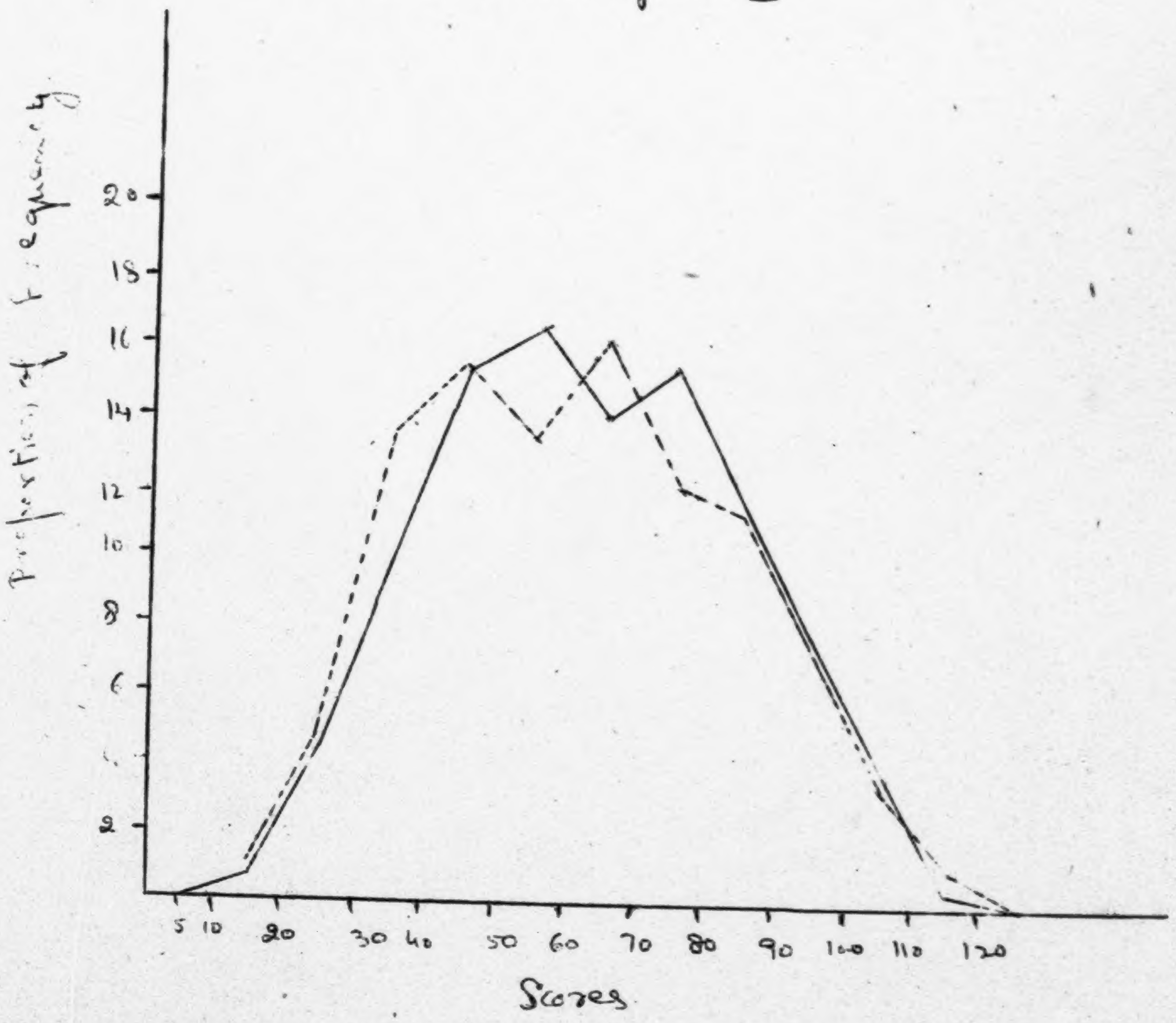
S.B. Gupta.

Distributions of scores in form A and B.
Form (V+N) – Rajasthan grade XI



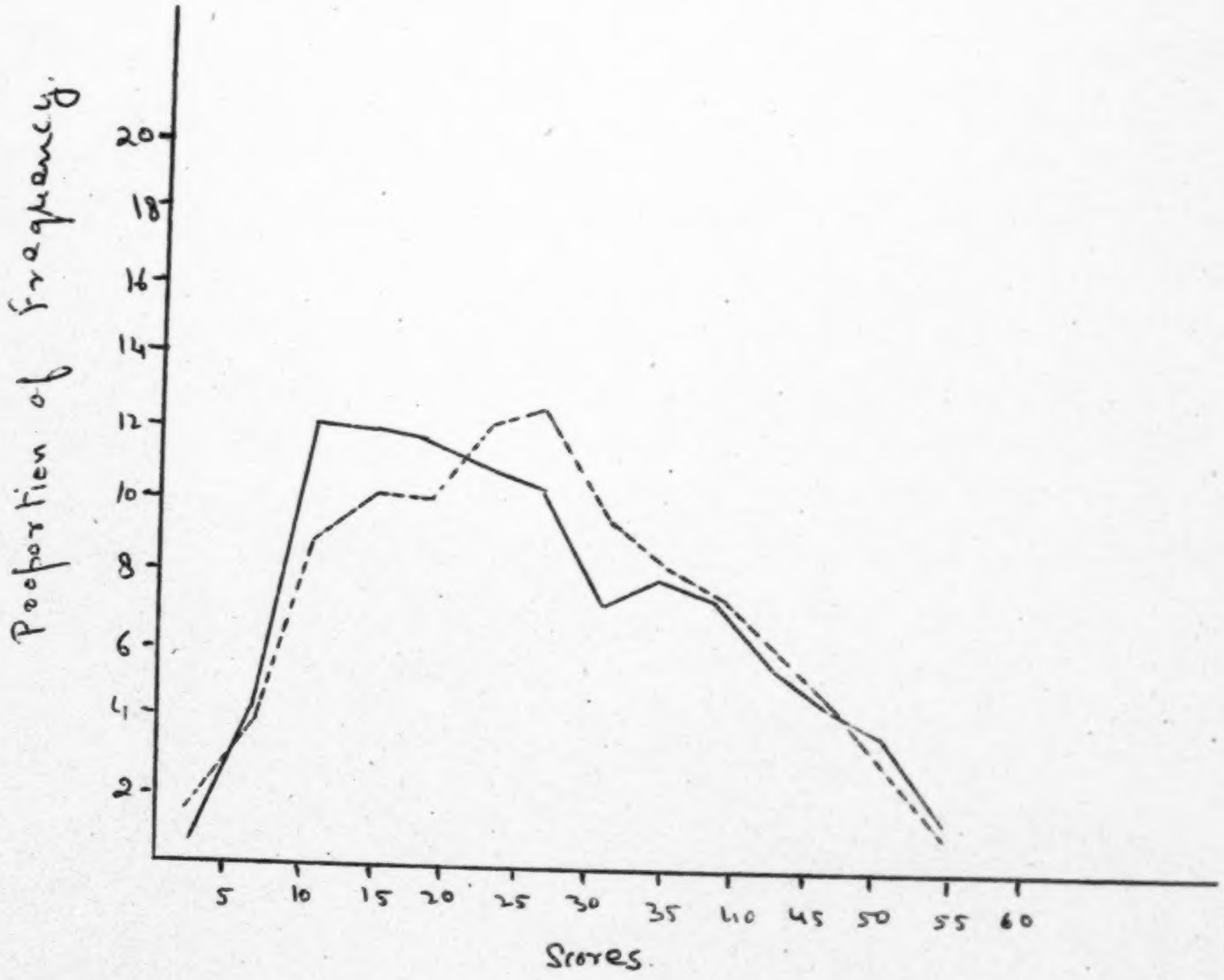
G.R. Gupta

Distribution of Scores in forms A and B
form V - M.P. grade XI



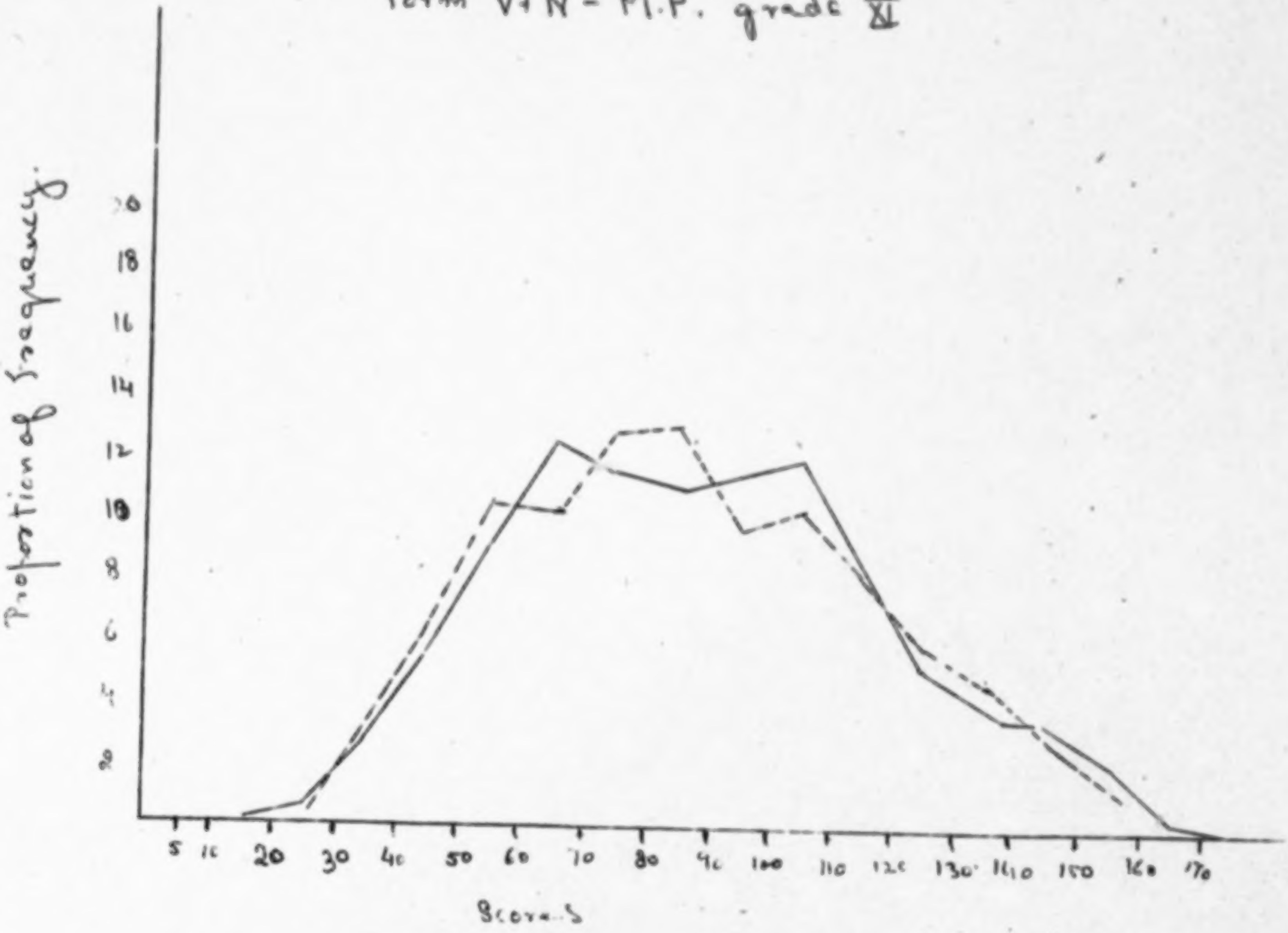
S.B. Gupta.

Distributions of Scores in forms A and B:
form N - M.P. grade XI



S.B. Gupta.

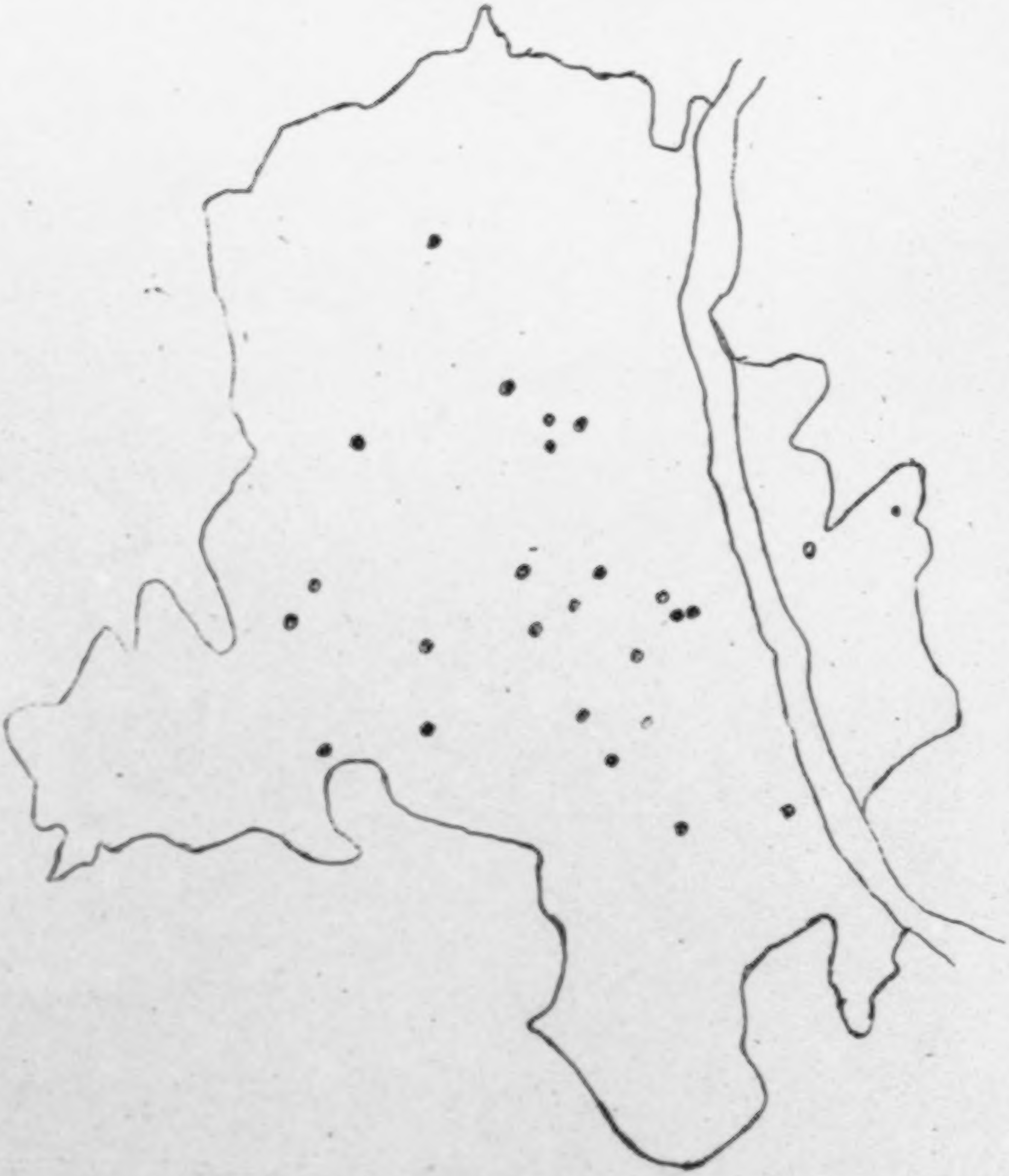
Distribution of Scores in forms A and B.
Form V+N - M.P. grade XI



S.B. Gupta.

DELHI

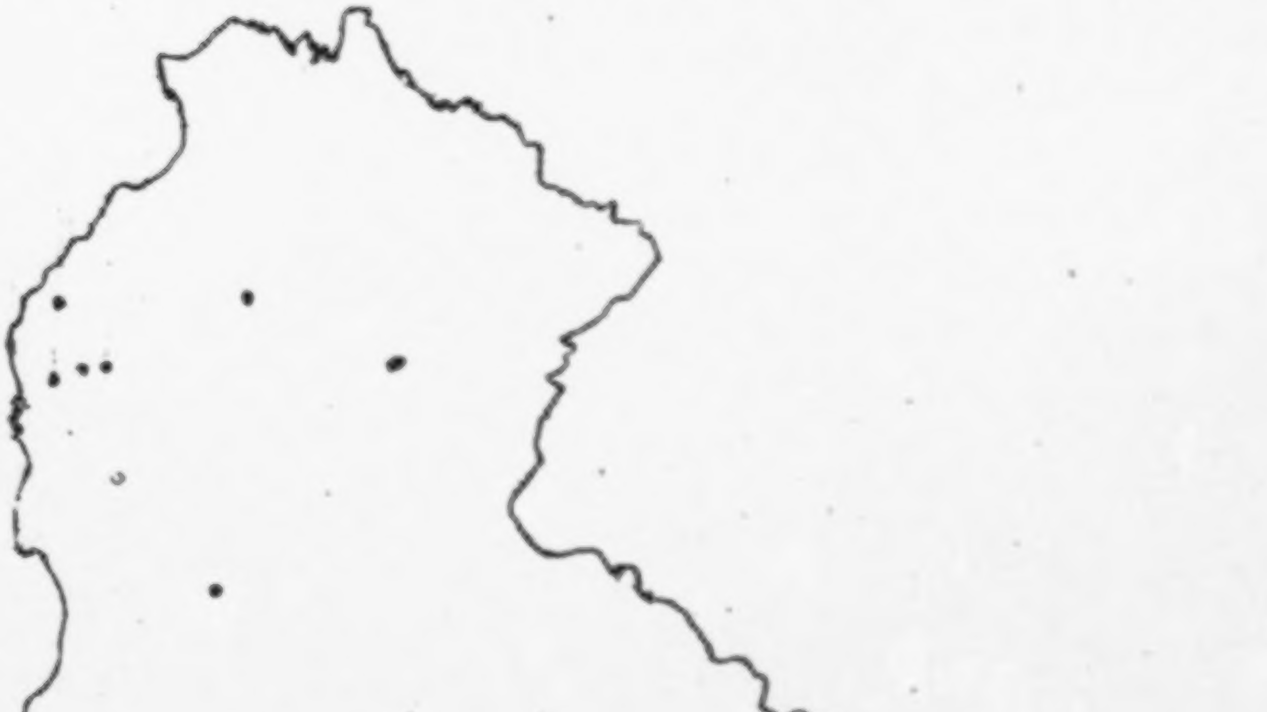
Scatter of Schools from wher Test Scores havebeen Included for Norms



S.D. GUPTA

UTTER PARDESH

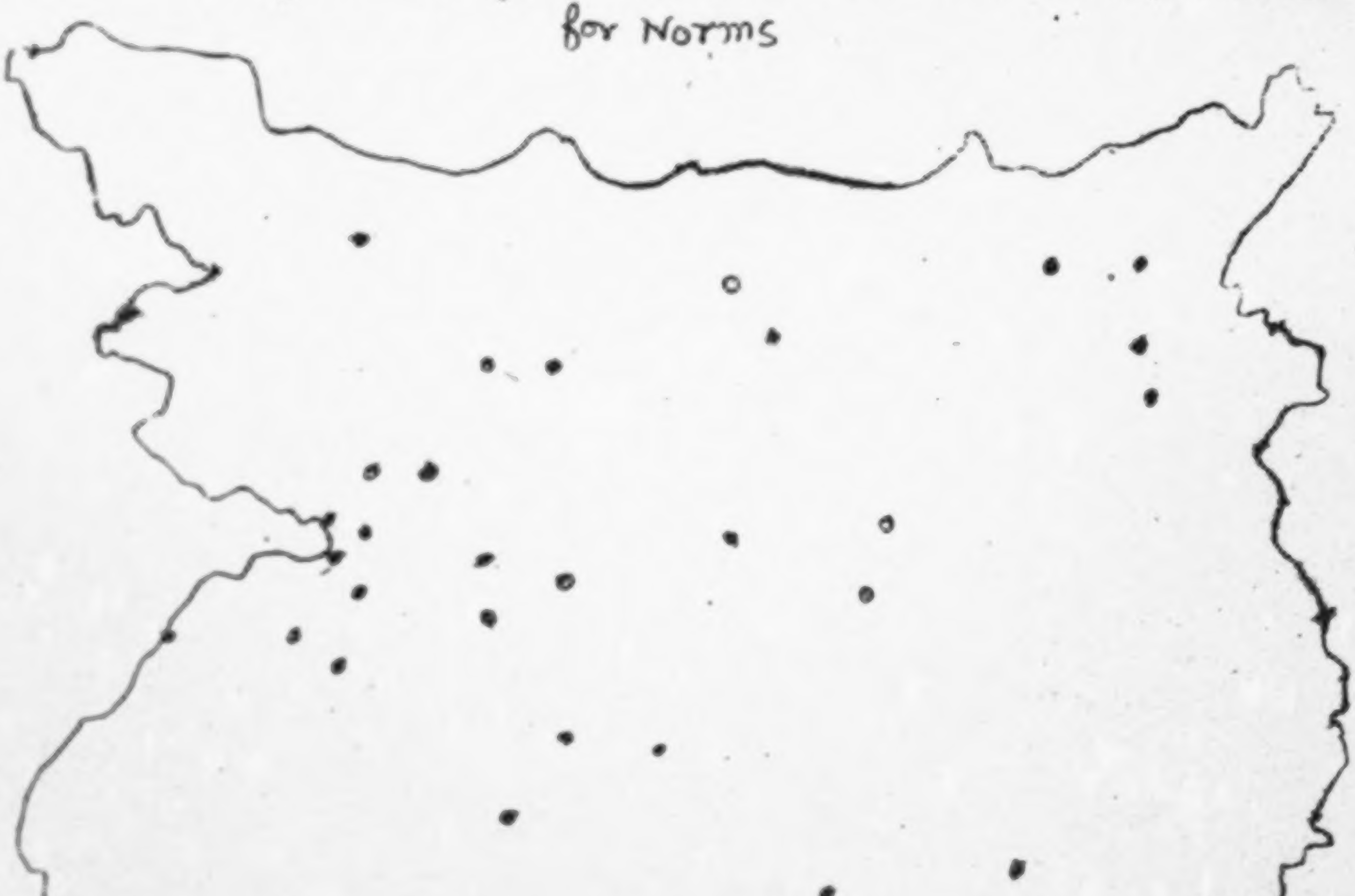
Scatter of Schools from where Test Scores have been Included for Norms



S.B.GUPTA

BIHAR

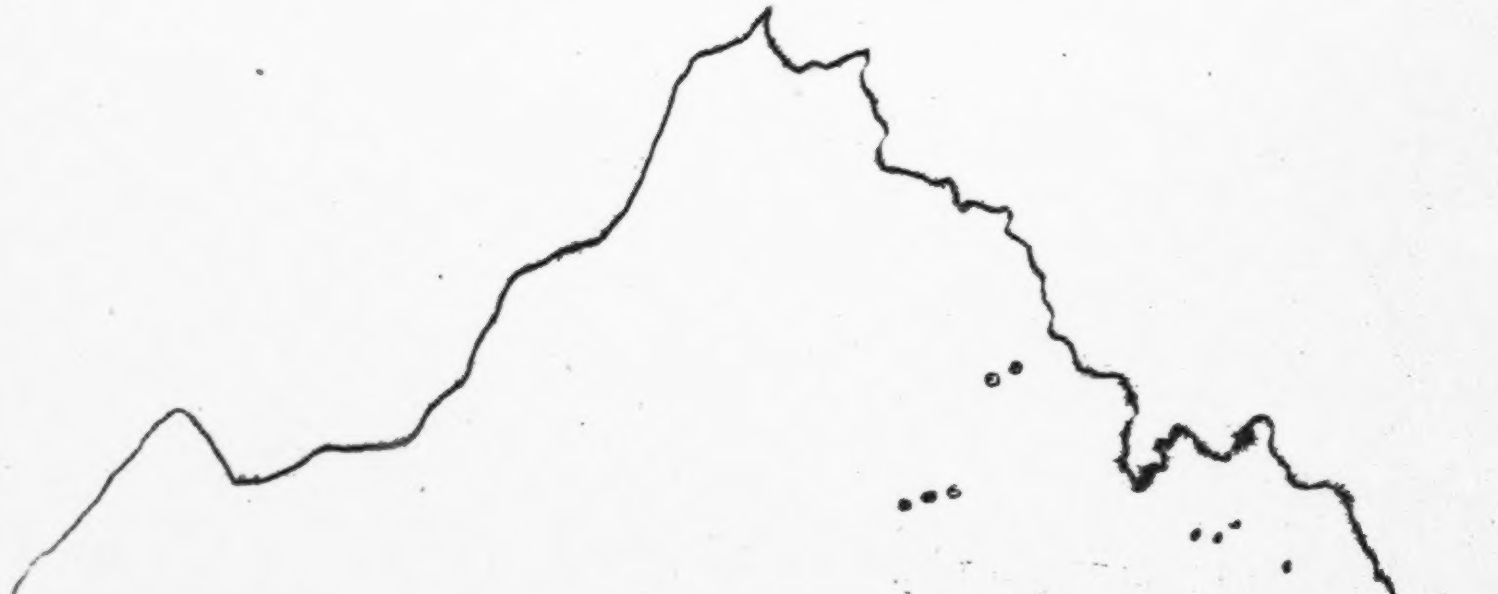
Scatter of Schools from where Test Scores have been Included for Norms



S.B. GUPTA

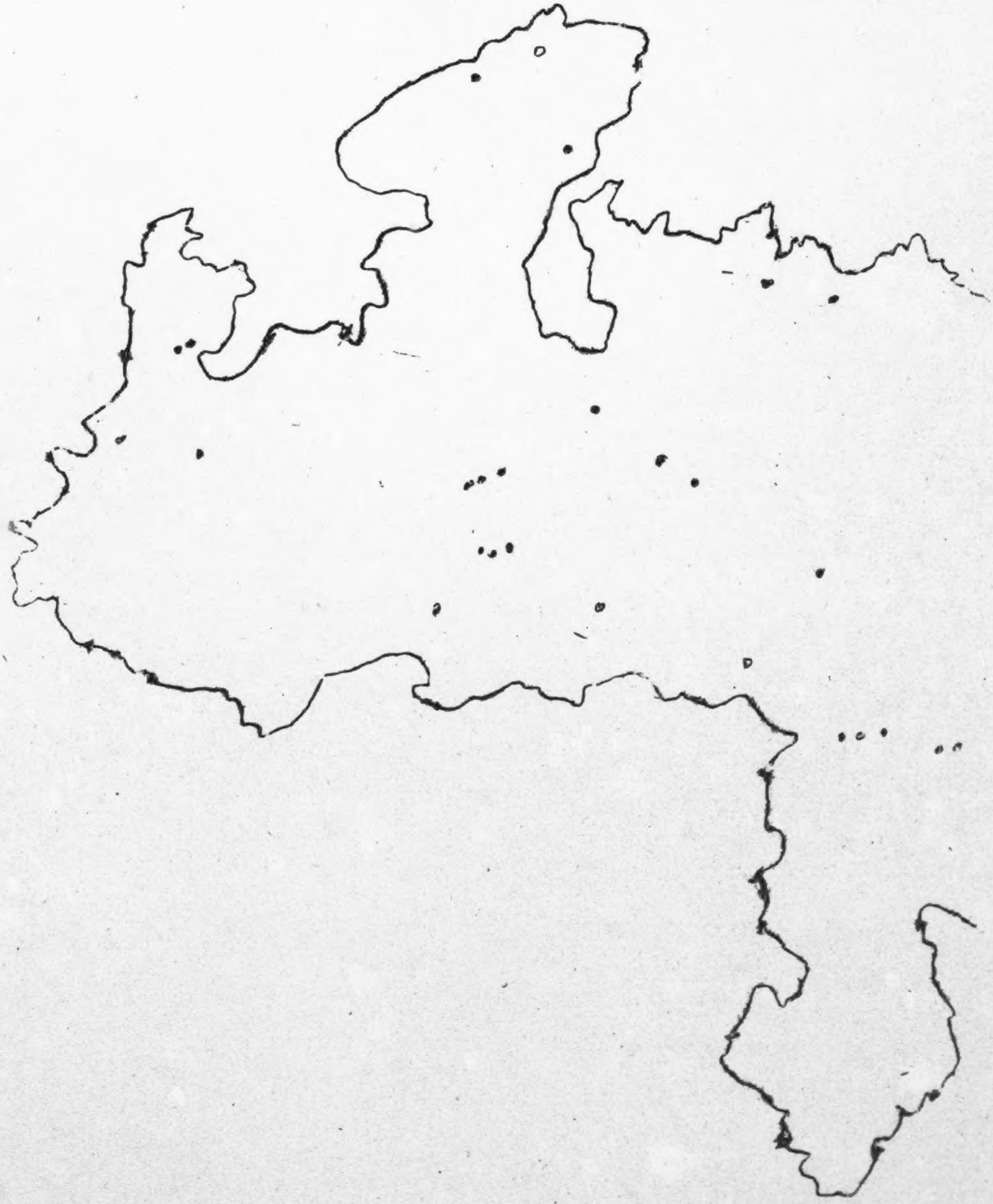
RAJASTHAN

Scatter of Schools from where Test Scores have been Included for Norms



S.B. GUPTA

Scatter of Schools from where Test scores have been



S.B. Gupta

MADHYA PRADESH

Included for Norms

Appendix III

Table 19 (a)

'Percentile Norms'

Grade VIII

Percentiles	Form V						Form N						Entire Battery (V + N)					
	Delhi	U.P.	Bihar	Raj.	M.P.	Total	Delhi	U.P.	Bihar	Raj.	M.P.	Total	Delhi	U.P.	Bihar	Raj.	M.P.	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
P5	35	29	29	33	30	31	9	5	6	6	5	5	49	37	42	44	37	41
	35	27	28	41	32	32	6	5	5	7	5	5	48	36	37	52	42	43
P10	41	35	35	38	34	36	12	6	9	9	6	7	58	45	48	52	43	48
	41	32	34	46	37	38	9	7	7	9	7	8	56	43	45	61	50	51
P15	46	40	39	43	37	41	14	8	11	10	7	9	64	52	55	57	43	54
	46	38	39	51	41	43	11	9	9	11	9	10	62	48	52	67	54	57
P20	50	43	43	46	41	44	16	9	13	12	8	11	69	56	62	62	52	59
	51	42	43	55	44	47	13	10	11	13	10	11	67	53	58	72	59	62
P25	53	47	47	50	44	48	18	10	15	13	9	12	74	60	66	66	56	63
	55	45	47	58	46	50	15	11	12	15	11	13	73	58	63	76	62	66
P30	56	40	51	53	46	51	20	12	17	15	10	14	78	63	69	70	59	67
	58	49	51	62	49	54	16	13	14	17	13	15	78	63	67	80	65	71
P35	59	53	54	56	49	54	21	13	18	16	11	15	82	67	73	74	62	70
	62	53	54	65	52	57	18	15	16	18	15	16	82	67	71	84	69	75

Contd...

Table 19(a) Contd

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
P40	62	55	57	59	52	57	23	14	19	17	12	16	85	71	77	77	65	74
	66	56	57	67	55	61	19	16	17	20	16	18	87	72	76	88	72	79
P45	65	58	60	62	55	60	24	16	21	18	13	18	89	74	81	80	68	78
	69	60	60	70	58	64	21	18	18	21	18	19	91	77	80	91	76	83
P50	68	61	63	65	58	63	25	17	22	19	14	19	92	78	84	84	71	82
	73	63	63	73	62	67	22	19	20	22	19	21	95	81	84	95	79	87
P55	70	65	66	67	60	66	27	18	24	21	15	21	96	82	88	87	76	86
	76	67	66	76	65	70	23	21	22	24	21	22	98	87	87	99	83	91
P60	73	68	70	70	64	69	28	19	25	22	16	22	99	86	92	90	80	90
	79	71	69	79	68	74	25	22	24	25	22	23	102	92	91	103	86	96
P65	76	72	73	73	67	73	29	21	26	23	18	24	103	91	97	94	84	94
	83	75	72	82	71	77	26	24	25	27	23	25	107	97	94	107	90	100
P70	80	77	73	76	71	76	30	22	27	25	19	25	108	96	102	98	88	99
	86	80	75	85	74	81	27	25	27	28	24	26	111	102	97	110	95	105
P75	84	81	82	79	75	80	31	24	29	27	21	27	112	102	107	102	93	104
	90	85	79	88	78	85	29	26	28	30	26	28	116	109	102	115	101	110

Contd.....

Table 19(a) Contd--

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
P80		88	86	87	84	79	85	33	25	30	28	24	29	118	108	112	108	100	110
		94	90	94	92	83	89	30	28	30	32	28	30	121	115	109	119	106	115
P85		94	91	92	89	85	90	34	28	32	30	26	31	124	116	119	114	108	117
		99	96	89	96	89	95	32	29	31	33	30	31	127	121	118	125	113	122
P90		99	93	97	96	92	97	36	30	34	32	29	33	130	125	126	124	118	125
		105	102	96	99	96	100	34	31	33	35	32	33	134	131	126	131	125	130
P95		109	109	105	106	100	106	38	33	36	35	32	35	142	137	137	137	131	137
		112	114	104	107	106	109	36	34	36	37	35	36	145	142	137	138	137	140
P100		140	140	130	140	130	140	40	40	40	40	40	40	170	180	170	180	170	180
		130	130	130	130	140	140	40	40	40	40	40	40	170	170	160	170	170	170

1. Figures in columns refer to raw scores on the tests, Figures on the top refer to Form A and the figure that follows to form - B.

Table 19 (b)

Percentile / Norms Grade XI

Percentiles	Form V					Form N					Entire Battery (V+N)				
	Delhi	U.P.	Raj.	M.P.	Total	Delhi	U.P.	Raj.	M.P.	Total	Delhi	U.P.	Raj.	M.P.	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P5	26	25	36	30	27	12	8	7	9	9	46	41	46	43	43
	26	31	41	28	31	12	9	9	8	9	47	45	55	42	45
P10	33	30	42	35	34	15	10	9	10	11	55	50	55	50	52
	34	26	47	33	36	14	11	12	11	11	56	53	66	50	53
P15	39	34	45	40	39	17	12	11	12	13	61	56	62	57	58
	41	41	52	37	41	17	13	14	13	14	63	58	73	55	59
P20	42	39	49	44	43	19	15	12	14	15	66	62	66	62	63
	45	43	56	41	44	20	15	16	15	16	70	62	78	66	64
P25	45	43	52	47	46	21	18	14	15	17	71	67	70	66	68
	49	45	61	44	47	22	17	19	17	18	77	65	82	65	69
P30	47	46	55	50	49	23	20	16	17	19	74	72	74	70	72
	52	43	63	47	50	24	19	21	19	20	83	59	86	70	74
P35	50	30	58	53	52	25	23	18	19	21	77	77	78	74	76
	56	50	65	50	54	26	20	24	21	22	87	73	90	74	78
P40	52	53	60	56	55	27	26	20	20	23	80	81	83	79	80
	59	53	67	54	57	28	22	26	22	24	91	77	94	78	83

Contd..

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1. Figures in columns refer to raw scores on the tests. Figure on the top refers to form A and the figure that follows to form B.

Table 19(b) Contd.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P45	55	55	63	59	58	29	28	22	22	25	84	86	88	83	86
	62	55	69	58	60	31	24	28	24	26	94	80	99	82	87
P50	58	58	63	66	60	30	31	24	24	27	89	91	93	88	90
	65	58	72	61	63	35	26	31	25	27	97	85	103	86	91
P55	60	60	69	66	64	32	33	27	26	30	92	95	97	92	94
	68	60	75	64	66	36	27	33	27	29	101	90	106	90	95
P60	63	64	73	70	67	34	35	30	28	32	95	99	102	97	98
	71	64	77	68	69	38	29	36	29	31	105	94	110	96	100
P65	66	68	77	73	70	36	36	33	30	34	98	104	107	101	102
	74	67	80	71	73	40	31	38	31	34	110	99	114	100	104
P70	69	71	81	76	74	38	38	35	33	36	102	108	111	105	107
	77	71	83	75	76	42	33	40	33	36	114	104	119	105	109
P75	72	75	34	80	78	40	40	39	35	39	107	114	117	109	111
	80	73	86	79	80	44	35	42	35	38	118	110	123	110	114
P80	76	80	87	84	82	42	43	42	38	41	113	120	122	115	117
	84	30	89	83	84	46	38	43	38	41	123	117	128	115	120

Contd..

Table 19(b) Contd..

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
P85	79	85	91	88	86	44	45	45	41	44	119	125	128	122	124
	89	86	93	88	88	48	41	46	41	43	130	124	135	122	127
P90	84	80	96	93	91	47	48	48	44	47	127	130	137	131	131
	94	91	99	93	94	50	44	49	44	46	137	131	142	130	134
P95	92	93	103	100	99	50	51	51	49	50	136	144	148	144	143
	101	98	105	100	100	52	48	51	48	50	146	140	148	140	144
P100	110	110	110	120	120	56	56	56	56	56	160	160	170	170	170
	120	120	120	120	120	56	56	56	56	56	170	170	180	170	180